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By Vermont Medical Society



INDEX TO VOLUME NINETEEN

VERMONT MEDICAL MONTHLY

Amendment, Why this	158
American Society for Physicians' Travel Study	74
Athletics and Health	116
Animals vs. Human Beings	286
Autopsies in the United States	174
Bact. in Insecticides	234
Bedbug, The	180
Births, Decrease of, in Berlin	208

BOOK REVIEWS.

Anatomy, Descriptive and Applied, Gray	281
Auscultation and Percussion, A Manual of, Flint	14
Biology, A Text-book of, Smallwood	255
Blood Pressure, Faught	282
Diseases of the Eye, De Schweinitz	281
Diseases of Nose, and Throat, a text-book of....	255
Diseases of the Stomach, Lockwood	281
Diet Lists of Presbyterian Hospital, Carter....	255
Doctor, the, in Court, Cables	255
Genito-Urinary Diagnosis and Therapy, Portner.	282
Glycosuria and Diabetes, Allen	280
Golden Rules of Diagnosis and Treatment of Disease, Cables	255
Gonorrhea in Women, Norris	255
Gynecology, Text-book of Practice of, Ashton ..	15
Hygiene and Sanitation, Price	202
Infection and Immunity, A Study of, Simon....	14
International Clinics	15, 127, 128, 282
Keen's Surgery, Keen	127
Laboratory Methods, Williams	14
Laboratory Methods, Williams and Williams	255
Marriage and Genetics, Reed	255
Massage, Its Principles and Technique, Bohm....	281
Minor and Operative Surgery, Wharton	281
Medical Men and the Law, Culbertson	128
Nervous and Mental Diseases	147
Normal Histology, A Course in	201
Obstetrics, Text-book of, Herst	14
Obstetrics, DeLee	127
Operating Room and Patient, Fowler	282
Otology, Manual of, Bacon	255
Pathogenic Bacteria and Protozoa, McFarland..	14
Prescription Writing, Eggleston	282
Psychanalysis, Brill	126
Recent Advances in Pharmaceutical Chemistry and Therapeutics, Merck	52
Rectum, Handbook of Diseases of, Hirschman ..	127
Sex, Its Origin and Determination, Reen	202
Skin Grafting, Freeman	127
Solidified Carbon Dioxide	147
Some Don'ts	52
Sterility in the Male and Female and the Treat- ment, Heihner	202
Stomach, Intestines and Pancreas, Kemp	15
Surgical Clinics, Murphy	128, 181
The Narcotic Drug	147
Therapeutics of the Gastro-intestinal Tract, Wegele	202
Tuberculin in Diagnosis and Treatment, Pottenger	146
Vaccine and Serum Therapy	147

China and the Opium Habit	151
Cholera	73
Cost of Living	13
Criminal Characteristics	155

CURRENT MEDICAL LITERATURE.

Abdominal Surgery, Incomplete	15
Acranial Monster, A Case of	20
Adrenalin in Urticaria	76
Albumin Feeding, High Percentage	22
Amebic Dysentery	130
Animal Experimentation	17
Antivivisection Legislation	147
Anginal Pains	226
Animal Cancer	171
Antityphoid Vaccination	77
Appendicitis, Chronic	77
Artificial Airway	171
Arthritis Deformans	129
Arterial Occlusion	225
Artificial Illumination	285
Auditory Canal	257
Bacterial Vaccine Therapy	229
Blindness, Preventable	283
Blood Cultures in Pneumonia	18
Bone Grafting, Non-Periosteal	229
Bone and Joint Tuberculosis	26
Bursitis, Traumatic Subdeltoid	149
Cancer	203
Carbohydrates in Infant Feeding	22
Catheter Knotted in the Bladder	15
Catheter Retention	18
Cerebral Syphilis	170
Chicken Sarcoma	17
Cholecystitis	21
Circumcision Tuberculosis	207
Cinematograph, Dangers of the	24
Coccidial Granuloma	223
Cough	203
Cyanosis in Dementia Precox	21
Decapsulation of Kidney	25
Dementia Precox, Cyanosis in	21
Diabetes, Skin Complications of	206
Diagnostic Signs, Significant	172
Diarrhea, Infantile	222
Differential Leucocyte Counting, Method of	16
Diphtheria Carriers	173
Diplosal	228
Disemboweled Infant	227
Edema and Nephritis	77
Emmenagogue Oils	207
Entamebas	130
Epinihrin in Kidney Hemorrhage	203
Ergot, Activity of	204
Esophorea, Apparent	284
Esophageal Stricture	130
Esophagus, Resection of	229
Fracture of the Carpal Scaphoid	230
Fracture Table	170
Gangrene of the Foot	223

Gastrojejunostomy	206	Potassium Permanganate	225
Gastrostomy	206	Predementia Precox	21
Gastric Dilatation	172	Purpura in Nursing Baby	203
Glycosuria in the Insane	26	Psychiatry, Teaching of	173
Glycosuria	25	Radium in Skin Diseases	227
Gold Chloride Test	203	Radical Ear Operation	259
Health Officers, the Training of	78	Renal Calculus	129
Health and Long Life	18	Renal Tuberculosis, Diagnosis of	24
Hemioptic Pupillary Reaction	283	Retention Catheter	18
Hemiplegia with Contralateral Optic Atrophy..	150	Salvarsan and Profeta's Law	207
Hookworm and Immigration	17	Sarcoma, Chicken	17
Hospital Clinical Records	151	Sarcoma, Melanotic	77
Hospital Operating Rooms	170	Scleral Wounds	285
Human Stock Show	205	Scoliosis	23
Hyperthyroidism	206	Skin Disorders of Childhood	222
Hysteria	23	Sexual Neurasthenia in Men	173
Infant Welfare Movement	22	Skin Diseases Among Indians	222
Inoculation of Rabbit with Paretic Brain Sub- stance	228	Skull and Sella Turcica	286
Intestinal Intoxication	52	Skin Grafting	229
Intradural Spinal Root Anastomosis	20	Spectacle Lenses	260
Kidney, Decapsulation of	25	Specialist in Medicine	16
Laryngitis, Chronic	259	Sphygmometer, Sahli's	129
Laryngitis, Syphilitic	259	Surgeon, the Qualifications of the	221
Laryngitis, Tubercular	259	Surgeon, the and Research	202
Laryngeal Tuberculosis	148	Syphilis of Bulbar Conjunctiva	285
Lead Poisoning	225	Syphilis, Parasite of	130
Luetin Reaction	171	Temporo Sphenoidal Abscess	228
Leucocytes Count	148	Thrombosis	174
Lumbar Puncture Needle	151	Thyroid, Surgery of	204
Luminal	226	Typhoid at St. Charles, Ill.	16
Lymphocytosis in Infection	76	Thrombophlebitis	228
Materia Medica, Restricted	226	Tonsillectomy	256, 260
Medical Sectarianism	76	Tonsillectomy Under Local Anesthesia	169
Medical Education in South Africa	22	Tonsillectomy Method, Sluder's	257
Mesenteric Cysts	207	Tripionema Pallidum	227
Middle Ear Deafness	258	Tubal Reimplantation	150
Midoperative Diagnosis	224	Tuberculosis and Obstetrics	20
Milk and Epidemic Sore Throat	18	Tuberculosis	25, 205
Milk and Sore Throat	18	Tuberculosis, Adult Joint	150
Morphinism, Aspects of	19	Tuberculosis, Bone and Joint	26
Myasthenia	18	Typhus	170
Myopia	284	Urethral Calculi, Multiple	227
Neuroblastoma	76	Urinary Calculi	21
Nitrogen and Ammonia Nitrogen in Urine.....	228	Variola and Vaccine	149
Nitroglycerin	228	Vasostomy	24
Nose and Ear Diseases	257	Vertigo, Ocular	284
Nose Operations, Complications of	257	Vertigo	148
Ocular Findings and Longevity	173	Vocal Cords, Paralysis of	260
Otolaryngology	286	Water Absorption	78
Operating Room Light	70	Yellow Fever and the Mosquito	76
Ophthalmia, Metastatic	282	De Roaldes Prize	74
Ophthalmia, Phlyctenular	283	Diabetes Mellitus	47
Ovarian Metastasis in Mumps	78	Dr. Wiley's Successor	75
Paranoid Insanity	150		
Pellagra	16	EDITORIALS.	
Perineum, Repair of the	78	Advertismo Occulta, A Recent Disease	43
Pemphigus Follicular	228	Cancer Research	69
Pharmacy, the Council of	203	Centennial Meeting of the Vermont State Medical Society	253
Phenolsulphonephthalein Test	225	Children's Diseases, Duty of Physician and Lay- man in	40
Plague in Porto Rico	229	College of Medicine, Clinical Study in	96
Pneumonia	205	College of Medicine, Rank of.....	277
Pneumonia, Blood Characteristics in	18	College of Medicine and the Mary Fletcher Hospital	217
Post Cataract Abstraction-Delirium	284		
Post Operative Exercises	151		

Dispensary, The New, of the College of Medicine.	96	Carbonic Acid Snow Used in Obliterating Angiomas	131
Friedmann Treatment	45, 94 and 119	Cardiac Disease, With Special Reference to Treatment	88
Gifts to Medical Science, Two Notable	276	Cervix Uteri, Diseases of	33
Hygiene in Public Schools	216	Constipation	79
Health Officers, New School for	292	Digitalis and Strychnine, A Preliminary Report of the Effect on Man	183
Insurance Act, Medical Attendance Under the British	9	Diseases of the Blood, Diagnosis of	135
Maternity Ward of the College of Medicine	217	Gleams from the Trip of a Medical Globe Trotter	192
Medical Attendance Under British Insurance Act.	9	Homosexuality	66
Medical Papers	166	Infectious Diseases, Role of Insects in Spread of	60
Owens Bill	120	Infectious Diseases, Recent Additions to Our Knowledge of the Etiology of	1
Post-Graduate Course in the College of Medicine.	98	Intestinal Obstruction, Case Reports, Points in Diagnosis of	63
Post-Mortem Examination in America	197	Infant Feeding, High Percentage of Fat Used in	84
Public Health and the Individual	292	Insects, Role of, in Spread of Infectious Diseases	60
Public Health, Gov. Sulzer's Message on	117	Internal Hemorrhage, Death From, With Unusual Findings at Autopsy	59
Roller Towel	119	Lane's Kink and Jackson's Membrane	35
School for Health Officers	197	Malpractice and the Doctor on the Witness Stand	211
State Medical Society, What is the Matter With the	140	Measles and Whooping Cough, Problems of Prevention of	53
Typhoid and the Country	166	Medical Societies, Function of	287
Venereal Disease, Law for Reporting	7	Middle Ear, Acute Inflammation of.	245
Vermont Legislature and the School	139	Medical Society, the State and the Doctor.	287
Vermont State Medical Society	217	One Hundred Years in Medicine in Vermont.	235
Fees of the French Physician	74	Pellagra Case, A Vermont	289
Friedmann's Cure	153	Pituitrin	274
Friedmann Evading the Law	154	Pregnancy, Sero-Diagnostic Test of	190
Gangrenous Gall-bladder Mucosa	39	Progress in Medicine and the Public Welfare.	267
Health Hygiene and Haunted Houses	178	Sensory Aphasia, A Contribution to the Study of.	133
Her Looks	138	Strychnine and Digitalis, A Preliminary Report of the Effect on Man	183
Hints	138	Syphilis, Diagnosis and Treatment of	158
Housing and Health	177	Syphilis, Ehrlich's Remedy in the Treatment of.	159
Iodine Vapor in Crystals	72	Sero-Diagnostic Test of Pregnancy	190
Infection Carrier, an Early Reference to	156	Teacher, In Appreciation of Great, Dr. A. O. J. Kelly	209
Jails vs. Schools	68	Wassermann Reaction, Value and Meaning of.	163
Joha, Salvarsan Preparation	138	Philippine Civil Service Examinations	47
Leucocytic Inclusions in Scarlet Fever	138	Prevalence of Morphine and the Cocain Habit	342
Lumbar Puncture in Typhoid Fever	7	Pure Food Well Cooked	177
National Department of Health	154	Radium in the United States	176
Newspapers and Suicides	182	Radioactive Waters, Fraudulent	233
News Items,	13, 72, 101, 103, 122, 142, 168, 200, 219, 254, 277, 293	Reading on Trains	252
		Recipe	13
		Resolutions, Senior Class	71
		Rules for Mental Hygiene	175
		Rural Sanitation	230
		Society for Advancement of Clinical Study	74
		Specialist, The	208
		Students of Medicine Decreasing in the United States.	75
		Trachoma	155
		Typhus Fever in the United States	179
		Typhoid Fever, Lumbar Puncture in	7
		Vermont State Medical Society, Members of	10
		Vermont State Medical Society, Members of the 100th Meeting	295
		Vermont State Medical Society Constitution	309
		Whooping Cough	181
		Women Motorists	196

OBITUARY.

Allbee, Dr. E. S.	126
Bruce, Dr. Martin C.	200
Phelps, Dr. A. H.	200
Richmond, Dr. Albert	103
Sherwin, Dr. O. W.	125
Winch, Dr. John H.	103
Opium Evil, A National Responsibility	180

ORIGINAL ARTICLES.

Address of Welcome to State Medical Society.	261
Appendicitis	249
Alcoholism and Eugenics	188
Alcohol Used as a Medicinal Agent, Effects of.	108
American Medical Association, Membership in.	91
Anesthesia, Local and Nerve Blocking in Major and Minor Surgery	213
Blood Pressure, Its Control by Drugs	217
Cancer Ferments, Recent Experimental Work with	105

The 100th Annual Meeting of the Vermont State Medical Society will be held at Burlington, October, 1913

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TABLE OF CONTENTS

ORIGINAL ARTICLES:—

Recent Additions to our Knowledge of the
Etiology of the Infectious Diseases,

By John F. Anderson 1

EDITORIAL 8

MEMBERS OF VERMONT STATE MEDICAL SOCIETY,

Revised to Jan. 15, 1913 10

NEWS ITEMS 13

BOOK REVIEWS 14

AN EPITOME OF CURRENT MEDICAL LITERATURE 15

THERAPEUTIC NOTES xii

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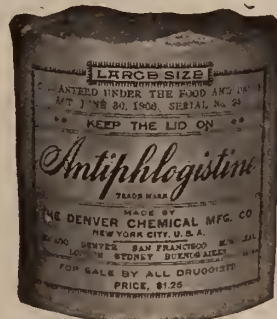
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MEDICINE.

Beverley Robinson, of New York (*American Medicine*, June, 1912), advocates the medical treatment of appendicitis in a larger proportion of cases. It remains to be proved, he thinks, that first or second attacks are followed by others, and whether such attacks are graver, or less so, if they occur. In any case, he thinks that they would not be really dangerous to life in a very large proportion of cases if they were properly treated medically. He quotes Sir G. T. Beatson approvingly. Beatson thinks it injudicious to interfere surgically during the acute stage of the disease as a rule. He thinks that such interference jeopardizes life. Beatson operates after the subsidence of all acute symptoms and his mortality has been but 3.3 per cent. Immediate operative interference in all cases, as practiced by some of his colleagues, gives a much higher mortality. Beatson believes in careful, sane medical management of acute appendicitis. Robinson maintains that appendicitis should not be regarded as a surgical disease more than, or even as much as, it is a medical affection. If conservative views ever come to prevail there will be a great diminution in operations. When they are performed, hurry,

nervous excitement and the shock consequent upon hasty removal from home to hospital, with risk of extension of peritonitis due to operative transport of poisonous bacteria, will be reduced to a minimum.

Admiral "Bob" Evans was visiting Brooklyn Navy Yard one day when a dispatch was handed him. Not having his eyeglasses he held the paper first far, then near, but couldn't read it. Then, handing it to an old Irish orderly, who was standing by, he said, "Read this for me, my man!" "Oi can't sir," replied the orderly. "Oi'm as ignorant as yerself, sir."—*Western Medical Review*.

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Vermont Medical Monthly.

VOL. XIX.

JANUARY 15, 1913.

NUMBER 1

ORIGINAL ARTICLES.

RECENT ADDITIONS TO OUR KNOWLEDGE OF THE ETIOLOGY OF THE INFECTIOUS DISEASES*

BY

JOHN F. ANDERSON,

Director Hygienic Laboratory, U. S. Public Health Service, Washington, D. C.

In the invitation to deliver an address at your annual meeting, extended to me on your behalf by your secretary, it was requested that I should choose as a subject some topic either of sanitary interest or one in general medicine. Realizing how little time the general practitioner has to devote to reading those journals where the results of experimental work are usually first reported I have chosen for my subject a discussion of some recent additions to our knowledge of the etiology of the infectious diseases. Some of this work has been reported in publications not readily accessible and is of so great an importance to all physicians, especially those in general practice and in public health work, that I am glad of this opportunity to review it.

These additions to our knowledge of the infectious diseases have been, up to the present time at least, of more practical value in the diagnosis and prevention of the particular diseases than in their cure. As general practitioners of medicine you are greatly interested in all advances that may assist you in diagnosis; and as the first to be aware of the presence in the community of infectious diseases you constitute the advance guard of your state health organization and are therefore concerned with methods of prevention.

It has not been many years since the aim of medical men, especially those in general practice, was to cure diseases and pay but slight attention to their prevention. But with the increase in our knowledge of the communicable diseases has come into practice a new branch

of medical science, that of preventive medicine, and this has been recognized in our medical schools by the establishment of chairs of preventive medicine. I am sure that no one here will take issue with me when I say that it is as much your duty to endeavor to prevent the spread of disease and assist the health authorities in their efforts as it is your duty to treat those already sick. You can do a great work along these lines by promptly reporting all cases of infectious diseases that come to your attention to the health authorities and by seeing that their regulations are carried out. I can conceive of no higher service by you to the state than this.

Our knowledge of the etiology of infectious diseases has advanced, not uniformly, but by leaps and bounds as new methods have been developed and new incentives have arisen.

With the evolution of a bacteriological technique, led by Pasteur and Koch, there was a rapid expansion in our knowledge of bacterial infections. The discovery that Texas fever of cattle was transmitted by the tick started extensive studies in the relation of insects to the transmission of disease. The demonstration that certain diseases are due to ultramicroscopic organisms—so-called “filterable viruses”—rapidly led to a study of many diseases of obscure etiology and cleared away much of the confusion regarding them.

Again, great epidemics have furnished the incentive for the most exhaustive study of some of our essentially epidemic diseases, as cholera, plague, influenza, meningitis, and poliomyelitis.

While very recent years have seen great advance in our knowledge of many of the phenomena of disease, in our understanding of its physiology, there has been a period not long since in which little was done to advance our knowledge of some important infectious diseases endemic almost throughout the civilized world.

Up to quite recently our knowledge of the infectious diseases appeared to be making but slight advance; and research workers realized that new methods or agencies must be employed. As a result of the use of certain methods or agencies of research, the value of which had

*Annual address at the meeting of the Vermont State Medical Society, October 10, 1912.

not previously been generally recognized or employed, there has been in very recent years a great increase in our knowledge of this class of diseases.

Along with these advances in our knowledge of these diseases considered for years as infectious has come the discovery that certain diseases formerly thought not to be communicable do after all belong to the infectious class. I refer especially to poliomyelitis, which for years was considered to be a degenerative disease of the nervous system and which recent researches have proved to belong among the infectious diseases.

The use of the monkey as an experimental animal, instead of the lower animals usually employed, has contributed more than any other factor to the important recent additions to our knowledge of the acute infections. Recent work has shown that the monkey is susceptible to a number of diseases that affect men and which are not readily transmissible to the small laboratory animals, such as rabbits, rats, and guinea pigs. We have thus been able to reproduce these diseases and to study them under laboratory conditions.

Another important advance was in the adoption of methods of experiment by which the infective material was introduced into the body so that it was brought into immediate contact with the organs or tissues primarily and most seriously affected in the natural disease, as in experimental meningitis and poliomyelitis, where the infective material is put directly into the cranial or spinal cavities.

Other factors of value have been the recognition of the fact that the same disease may present a very different clinical picture in one species as compared with another, even to a difference in post mortem findings, and yet be due to the same etiological agent. Filtration through earthenware filters, by means of which contaminating organisms are removed; greater experience in interpreting results, the training and development of men for research, the foundation and endowment of institutions for research, all have contributed to what we know of the communicable diseases.

After this somewhat general preliminary discussion I shall now endeavor to review some of the more recent and important work on the infectious diseases.

In collaboration with Dr. Goldberger I have been fortunate to have had the opportunity to work on two of these—measles and typhus fever—and I may be pardoned if I discuss the work on those two diseases somewhat in detail.

POLIOMYELITIS.

Students of the epidemiology of poliomyelitis had begun to realize that this disease belonged to the infectious class before Landsteiner and Popper in 1909 had shown for the first time that the disease could be transmitted to monkeys by inoculation with an emulsion of the spinal cord from a child who died in the fourth day of an attack of infantile paralysis. Since then, as the result of an immense amount of work done both in this country and abroad, many important facts have been discovered in regard to the nature of the virus, and the channels by which it may enter and leave the body.

It has been shown that the disease may be transmitted by inoculation to monkeys and occasionally to rabbits. The disease belongs among the filterable viruses; that is, its virus is capable of passing through earthenware filters and consequently is so minute that it cannot be seen even with the highest powers of the microscope. It has been shown that the virus is present in various organs of human beings dead from poliomyelitis and that the tonsils of monkeys, five months after the acute stage of the disease, still contain the infective agent. The same is probably true of human beings; such persons might well become sources of infection.

Kling, Wernstedt, and Pettersson have recently shown that poliomyelitis may be produced in monkeys by the inoculation of filtered washings from the mouth and nose, from the trachea, and from the small intestine, collected at autopsy from cases of infantile paralysis dying in the early stages of the disease.

At the recent meeting of the Congress on Hygiene and Demography, Dr. Pettersson presented a summary of the more recent investigations of Kling, Wernstedt and Pettersson in which the virus of poliomyelitis was shown, for the first time, to exist in the buccal and intestinal secretions of persons in the acute stage of the disease, convalescents, persons suffering from clinical obscure infections of poliomyelitis,

and apparently healthy persons in the immediate vicinity of cases of poliomyelitis.

Of especial importance was their report that they had succeeded in demonstrating for the first time the virus of the disease in the buccal and intestinal secretions of persons who gave no history of recent illness, but who had come into intimate contact with other persons in their families sick with poliomyelitis. The opinion was expressed that such "virus carriers" are most likely very common during epidemics of poliomyelitis, probably exceeding the number of persons with clinically recognizable infections. These findings would seem to have almost justified the conclusion that the infection is disseminated by transfer of the virus directly from person to person; but doubt was cast upon the validity of such a conclusion, as a result of the preliminary report by Dr. M. J. Rosenau on the possible agency of stable flies (*Stomoxys calcitrans*) as the transmitter of the disease. Dr. Rosenau, at the Washington meeting, stated that 6 out of 12 monkeys exposed daily for several weeks to the bites of large numbers of *Stomoxys*, which were daily allowed during this time to bite monkeys experimentally infected with poliomyelitis, had developed symptoms of the disease. Two of the number had become paralyzed and died, 3 were paretic at the time of the report, and one recovered after a short illness.

In view of these apparently conflicting findings, the question at present remains an open one as to whether the disease is directly contagious, whether a biting fly is a necessary factor in its transmission, or whether it may be conveyed in more than one way.

MEASLES.

Measles may be said to be practically a worldwide disease, one that is always endemic and often epidemic, especially in our larger cities. But in spite of the fearful toll in deaths that it yearly exacts, the large number of persons incapacitated for varying periods by illness, and the serious complications and sequelae, measles is too often regarded by physician and the laity as a necessary incident of childhood. The disease was the cause of 44,080 deaths in the registration area of the United States during the period 1900 to 1910. Its importance as compared with

certain other diseases in the registration area during 1910 is shown in the following table:

TABLE NO. 1.

DEATHS IN REGISTRATION AREA OF THE UNITED STATES IN 1910.

Disease	No. of deaths	Deaths per 100,000
Diphtheria and croup,	11,512	21.4
Measles,	6,598	12.3
Scarlet fever,	6,255	11.6
Whooping cough,	6,146	11.4
Cerebrospinal meningitis,	2,272	4.2
Infantile paralysis,	1,459	2.7

While it has been quite the general belief among clinicians for many years that the infective agent of measles is contained in the blood, in the nasal and buccal secretions, and perhaps in the "scales," the experimental data in support of this belief previous to 1911 were very incomplete.

Last year the work of Anderson and Goldberger on measles converted what had previously been opinions based on clinical observations into proven facts based on laboratory experiments. These authors showed that the monkey was susceptible to infection with measles by inoculation with blood from human cases of the disease. They showed that the apparent insusceptibility of the monkey to infection with measles was largely due to a limitation of the period of infectivity of the blood to the very early stage of the disease, before or shortly after the appearance of the eruption. Thirty-six hours after the first appearance of the eruption the infectivity of the blood for the monkey becomes greatly lessened and rapidly decreases. Studies on the nature of the virus as it exists in the circulating blood showed that the infective agent is capable in a certain proportion of cases of passing through a Berkefeld filter and therefore is included among the filterable viruses.

The virus resists drying for 24 hours, freezing for the same length of time, and is destroyed by heating at 55° C. for 15 minutes. Well monkeys, when placed in the cage with sick monkeys during the early stages of the disease, contracted measles after an incubation period of 5 to 11 days. Experiments made to test the infectivity of the nasal and buccal secretions from human

cases of measles showed that such secretions, collected within the first 48 hours after the appearance of the eruption, were infective for monkeys by subcutaneous inoculation; this would correspond to about the fourth and sixth days of the disease.

Experiments made to determine the duration of the infectivity of these secretions strongly suggested a reduction, if not a total loss of their infectivity with the approach of convalescence. Attempts were made without success to demonstrate the presence of the infective agent of measles in the "scales" collected from human cases of the disease from four to seven days after the appearance of the eruption.

Since the work of Anderson and Goldberger was reported, three papers by different workers have been published corroborating their results as to the presence of the virus in the blood of human cases and the susceptibility of the monkey to measles. Hektoen and Eggers, while chiefly concerned in their work on experimental measles in the monkey with a study of the leucocytes, state that the general results of their experiments agree very well with those reported by Anderson and Goldberger.

Nicolle and Conseil have reported the infection of the bonnet monkey with measles by the inoculation of blood drawn 24 hours before the appearance of the eruption. And more recently Lucas and Prizer have reported the observation of Koplik spots in monkeys experimentally infected with measles.

The results of these studies on measles give us our first definite information based on carefully controlled laboratory experiments as to the seat of the virus, its means of exit from the body and the probable avenue of infection. The experimental observations on the duration of infectivity of the secretions are in accord with previous clinical observations that cases of the disease are as a rule not infective after convalescence is well established. The great importance of this point, and the further one as to the noninfectivity of the "scales," from a public health aspect can be readily appreciated.

SCARLET FEVER.

Scarlet fever and measles rank close together in our morbidity and mortality reports, and I shall now refer briefly to some recent investigations of scarlet fever which offer a hope that

the discovery of the cause of this disease may not be far distant.

Early in 1911 Cantacuzéne and also Bernhardt reported independently the production of scarlet fever in the lower monkeys, using as a source of infection lymph glands, blood, pericardial fluid, and scrapings from the tongue of scarlet fever patients. Both authors claimed to have obtained in monkeys a febrile reaction, attended with an eruption, appearing after a variable incubation period and followed by desquamation of the skin.

Cantacuzéne did not mention any lesions of the throat, but was very positive in affirming that his monkeys were infected with scarlatina. Bernhardt claimed to have succeeded in transmitting the infection from monkey to monkey, but denied the specific relationship of the streptococcus, and believed that the infective agent of scarlatina should be classed among the filterable viruses.

Just about the time that these observations were reported, Landsteiner, Levaditi and Prasek in a preliminary note reported some attempts on the transmission of scarlet fever to chimpanzees; and in a recent paper have presented their work in detail. They endeavored to infect chimpanzees with scarlet fever by various methods of inoculation, using blood, emulsion of lymph glands and deposits from the tonsils of cases of scarlet fever. In two out of four experiments the chimpanzees developed a reaction very striking in its resemblance to scarlet fever in the human being. In the other two chimpanzees the inoculations were followed only by angina without any cutaneous manifestations. They were unable to infect the lower monkeys with scarlatina and are unable to account for the results of Cantacuzéne and of Bernhardt. It is hoped that further work will result in adding more definite knowledge as to the etiology and mode of transmission to that which we already have.

Recently Döhle has reported finding in the polymorphonuclear leucocytes of scarlet fever bodies which he, and others since then, believe are of diagnostic importance.

TYPHOID FEVER.

It has now been thirty years since Eberth first described the *Bacillus typhosus* and almost thirty since Gaffky isolated the same organism

in pure culture. But in spite of the fact that the study of the typhoid bacillus is a matter of almost universal practice in all laboratories and that many are engaged in clinical and epidemiological studies of the disease, experimental proof that the typhoid bacillus was the specific cause of this infection has been scant.

In view of the apparent lack of advance there are many, even in this day, who question whether the bacillus described by Eberth is really the specific etiological agent of typhoid fever. Recently there has appeared work the results of which show that this skepticism is not justified and that the typhoid bacillus is the specific etiological agent of typhoid fever.

Grünbaum¹ in 1906 made attempts to infect chimpanzees with typhoid fever by feeding them pure cultures and also by feeding a portion of the stool from a case of typhoid fever; but his results, while very suggestive, were not conclusive.

In March, 1911, Metchnikoff and Besredka² presented a paper on experimental typhoid fever in the chimpanzee, reporting work which is of so much interest and importance that I think a few words on it may not be without interest to you. Metchnikoff and Besredka having in mind the history of hog cholera, instead of using pure cultures of the typhoid bacillus, endeavored to infect a chimpanzee with the feces of a case of typhoid fever containing an abundance of typhoid bacilli. The chimpanzee, eight days after ingestion of the fecal material mixed with food, developed typhoid fever. The appearance of diarrhea, the presence of typhoid bacilli in the blood, and the development of specific agglutinins in the blood serum left no doubt as to the result and clearly showed the susceptibility of the chimpanzee to infection with typhoid fever by feeding.

They were unable to either infect or vaccinate apes by the feeding and injection under the skin of the fluid obtained by the filtration of typhoid stools. From this the authors conclude that the typhoid bacillus, and not a filterable virus, is the etiological agent in typhoid fever. They found that the lower monkeys are only exceptionally susceptible to typhoid fever and that rodents,

such as the rabbit and guinea pig, are not at all susceptible to infection by feeding.

In the same paper and also in a later one¹ they report attempts at protective inoculation by various means. They found that neither killed cultures or their autolysates protected chimpanzees against infection with typhoid fever, but that vaccination with living cultures produced an immunity apparently as definite as from an attack of the disease. Vaccination with nonsensitized cultures produced an intense local and general reaction, while *sensitized* cultures caused only a feeble local and almost no general reaction; both appeared to confer equal immunity to infection.

The work reported by Metchnikoff and Besredka fulfil for the first time the postulates of Koch as to the etiological relation of the *Bacillus typhosus* to typhoid fever, discredits the theory of a filterable virus in the disease, shows the possibility of absolute protection by vaccination with living cultures, and emphasizes the importance of not relying upon vaccination with killed cultures to the exclusion of all other precautionary measures.

TYPHUS FEVER.

The last appearance of typhus fever in the United States in epidemic form was in New York in 1891-92. Since then, except for an occasional case at some of our large seaports, it was believed that the disease had been eradicated from this country.

It has been a subject of wonder to health authorities that in spite of the occasional arrival in this country of immigrants sick with typhus and of many persons from endemic foci of the disease, typhus fever apparently did not gain a foothold in the United States. That this had already taken place has recently been shown through the demonstration in the Hygienic Laboratory, U. S. Public Health Service, that a disease observed and studied in New York City by Dr. Nathan E. Brill is identical with typhus fever.

As far back as 1896 Dr. Brill began to notice from time to time among his typhoid cases types that were distinguishable from typhoid and paratyphoid fevers because of the short duration of the fever, the presence of a distinctive erup-

¹Grunbaum, A. S.: Some experiments on scarlet fever, and measles in the chimpanzee. *Brit. Med. Jour.*, April 9, 1904, p. 817-819.

²Metchnikoff, Elie; & Besredka, A.: Recherches sur la fièvre typhoïde expérimentale. *Ann. de l'Inst. Pasteur*, vol 25, March 25, 1911.

¹Metchnikoff, Elie; and Besredka, A.: Des vaccinations antityphiques. *Ann. de l'Inst. Pasteur*, vol. 25, December, 1911, p. 861-881.

tion, and the absence of specific agglutination reactions. He continued his observations on this type of fever and published two papers based on the study of 255 cases observed up to December, 1910.

About the time that Dr. Brill's second paper appeared, Dr. Goldberger and I were engaged in the study of the typhus fever of Mexico and, having the picture of that disease clearly in mind, we were struck by the very marked clinical resemblance between it and the disease described by Brill. Influenced by this resemblance, we endeavored to see cases of Brill's disease in order to determine, if possible, the relationship between that infection and typhus fever.

Our efforts to do this were not successful until September, 1911, when we saw a well marked case of Brill's disease in the wards of Mount Sinai Hospital, New York. Blood drawn from the arm vein of this patient was used for the inoculation of monkeys, one of which, nine days after inoculation, developed a fever which reached its maximum six days later. The fever lasted for 11 days, when it terminated by rapid lysis. Blood was drawn from this animal at the height of its fever and successfully used for the inoculation of other monkeys. Since then this infection has been carried through 22 monkey generations by inoculation of blood, and is now being continued by passage through guinea pigs.

Having established the susceptibility of the rhesus monkey to inoculation with defibrinated blood from cases of the disease described by Brill, it became important to determine the relationship of that disease to typhus fever; and for this purpose one of us proceeded to Mexico City, taking monkeys that had recovered from infection with the virus originally obtained from our Case No. 1 of Brill's disease, as well as fresh animals for controls.

Without going into the details of our tests, it is sufficient to state that seven monkeys that had recovered from an infection with virus obtained from a case of Brill's disease were tested for their immunity to Mexican typhus, together with nine fresh animals.

Of the seven Brill-immune monkeys, not one showed any reaction as a result of inoculation with virulent typhus fever blood; while all nine of the control animals developed the fever.

Ten monkeys that we had reason to believe to be resistant to Mexican typhus, and eight fresh

animals as controls, were tested for their susceptibility to Brill's disease. None of the Mexican typhus-immune monkeys showed any indication of a reaction when inoculated with virulent blood, while seven of the eight control animals did react.

These results justified the conclusion that an attack of Brill's disease confers immunity to subsequent infection with Mexican typhus and, conversely, that an attack of typhus confers immunity to subsequent infection with Brill's disease. To put it in a simpler way, Brill's disease, so-called, and typhus fever are identical.

During the progress of the work necessary for the demonstration of the identity of the so-called Brill's disease and Mexican typhus we gave attention to various related problems. The particular one to which I wish to refer is that of the mode of transmission. We found that the New York disease, as also the typhus of Mexico, may be transmitted from monkey to monkey by the bite of body lice that had been allowed to feed on monkeys sick with the disease; these results were in harmony with and confirm those previously reported by ourselves and others.

We were unable to transmit the disease by the bite of bed-bugs, or by the inoculation of the buccal and pharyngeal secretions from a human case of typhus. I am convinced that the only way by which typhus is transmitted is by the bite of the body louse, and possibly by that of the head louse.

Now that it is shown that typhus fever is identical with Brill's disease and that Brill's disease has been endemic in the city of New York for a great many years, there is good reason to believe that what is true of New York is true also of other large American and Canadian cities. In fact, since our first work appeared, cases have been reported from several cities.

When one recalls how frequently the mild forms of even the familiar infectious diseases are overlooked it need occasion no surprise that the benign form of a disease, usually thought of in our country as an exotic plague or at least perhaps as a medical curiosity, should fail of recognition. That this is not applicable to typhus alone is strikingly shown by the history of pellagra and of hookworm disease in the United States.

The demonstration that Brill's disease and typhus are identical clearly shows that the class-

ical picture of typhus, as the "great masters of medicine" depicted it, is as incomplete as has been shown to be the case with the classical conception of yellow fever and smallpox. Hereafter we must carry in our minds the picture not only of the grave and fatal forms recognized by our fathers, but also of the mild and benign type so patiently studied and carefully depicted by Brill.

The recognition of these mild forms of typhus gives us a rational explanation of what Osler has well characterized as a "remarkable feature" of typhus, namely, the occurrence of a few cases at long intervals of time from any other outbreaks, and at great distances from any known foci of the disease. In other words, these mild forms constitute the missing epidemiological link between so-called sporadic cases or outbreaks. In the perpetuation of typhus this mild form plays somewhat the same rôle that the "missed" or the "carrier" cases do in such diseases as diphtheria and typhoid.

The demonstration of the endemic presence of typhus fever in the United States required the American sanitarian to recognize the existence of a problem of which he has heretofore been unaware and to be on his guard against a disease that may at any time assume epidemic prevalence and virulence.

DISCUSSION.

Dr. B. H. Stone:—I must express my gratification, and that of the Society that we are able to-day to listen to the very last word along this line from a man who knows. In the first place our increased knowledge of the cause and spread of all these diseases carries with it increased responsibilities for their prevention, and the discomfiting knowledge of increased difficulty in checking the spread of these diseases, and shows us how inefficient must be some of our quarantine. The healthy carrier is the bane of the sanitarian. This new knowledge of parasitology of these diseases is driving us into a new method of classification. We must classify them according to their etiology.

Another thing to which I wish to draw attention in the work on measles and scarlet fever is the fact which Dr. Anderson mentioned, the infectivity of the scales in either of these diseases has not been proven, and also the fact that it *has been* proven that the secretions of these diseases are dangerous. That may mean that we have kept some of these cases in quarantine longer than was necessary, and that in order to prevent the spread of these diseases in school, that children should be removed from schools as soon as they begin to show symptoms of acute coryza and kept out until it is certain that they are not coming down with some of the exanthemata.

Dr. French:—I wish to ask Dr. Anderson if he thinks it desirable or practical that syphilis should

be reckoned among the contagious diseases and be reported to boards of health and handled as a contagious disease?

Dr. J. F. Anderson:—I have nothing to add to the discussions except to concur heartily in what Dr. Stone has said in the care of cases. How we are going to control them we don't know at the present time.

In regard to syphilis, as to whether it should be reported as a contagious disease, I have not thought about it enough to tell you, but it has been attempted in certain places, but there is always the trouble of getting cases reported,—a good deal more trouble than in getting scarlet fever and diphtheria.

Dr. C. F. Dalton:—In accordance with the usual custom of this Society and also in appreciation of the fine address which Dr. Anderson has given us, I move that he be made an honorary member of this Society.

Motion seconded, put and carried.

Dr. J. F. Anderson:—I thank you very much, it is an honor that I appreciate. I feel that I have some ties binding me somewhat closer than some men who come here to Vermont because my professor of anatomy was a professor who had many of those present here to-day as his pupils. I refer to Dr. Towles.

Dr. Melville:—I wish to tender my personal thanks to Dr. J. F. Anderson. I am not quite certain, but by the sound of his paper I believe that I am indebted to Dr. Anderson for something else besides his good paper. Some six weeks ago I was called to see a case in Orleans County which had been rather baffling for some little time, and a few days before this I had been reading an article by Dr. Anderson on pellagra, not thinking I should ever see any pellagra, but I arrived at this patient's house at night and the case puzzled me. It was a patient I had seen several times before, but from the reading of Dr. Anderson's paper, it was impressed upon me that this was a case of pellagra, and upon questioning the physician in charge of the case he was satisfied to say that he didn't know what the case was, that pellagra fitted it better than anything else, and when we went a little deeper into the subject we found we had a typical case of pellagra, and I have to thank Dr. Anderson for helping me out in that particular case. I took the liberty of using a good many of Dr. Anderson's writings, and in sending a review of pellagra to the State Board of Health. They have published it in the September bulletin and you will all have it inflicted upon you sometime next month.

French authors report success with lumbar puncture in typhoid fever. They think that meningeal hypertension may be present in various acute infections without producing a definite group of symptoms pointing to the meninges, and urge, in view of the readiness with which lumbar puncture is now performed after a little practice, and its harmlessness, that this measure be availed of in infections when there are present evidences of meningeal hypertension, particularly violent and persisting headache, even when they occur as isolated symptoms.—*The Medical Times*.

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EDITORIAL.

The British Medical Association on December 31st at an especially called meeting refused to accept the modified terms offered by Lloyd George for medical attendance under the insurance act. The meeting of delegates lasted all day and the final determination to reject the terms of the chancellor was carried by a vote of one hundred fifty to twenty-one. The government and medical profession of Great Britain through the British Medical Association have been struggling for a year or more to come to some satisfactory agreement by which the medical benefits under the pension act can be satisfactorily administered. The matter is one of the details of the old age pension to which the liberal government of Great Britain is pledged. There is a confusing amount of detail to the proposals and counterproposals of the government and the Association but some of the definite points in the government's position are that all persons whose total annual income is less than eight hundred dollars are to be entitled to medi-

cal attendance furnished by the government and paid for by a fund to which the workmen, employers and the government jointly contribute. This removes about fifteen million population of the united kingdom out of the field of private medical practice. The act allows \$1.62 for a medical call and an amount of approximately \$.36 to cover the drugs prescribed at each call. These drugs are to be dispensed by the physician himself in country districts but by authorized chemists and dispensing agents in municipalities. The contract into which the doctor is asked to enter is a free one. A call is issued in each community for those men who wish to practice under the terms of the act and a panel is made up of those men and posted in the post-offices and other public buildings. The medical man can be dismissed by the patient and the doctor is at liberty to give up the patient if he so desires at the end of the year. He can assume the duties of attendance on as many pensioners as he chooses, agreeable to the pensioners themselves. Complaints are to be made in writing and referred to special committees and sub-committees appointed primarily by the government and composed of representatives of the three classes interested, the employers, pensioners and the medical profession, the last to compose at least one-tenth of the personnel of each committee. It is argued by those favoring the act that this legislation will do away with systems of cheap doctoring; that a large number of institutions now only existing because they make a profit out of doctors will be legislated out of existence; that it will be difficult for any such undesirable organizations to continue to exist; that the act provides a system which will enable the medical profession to say good-bye to all those conditions which have been attached to the so-called club and contract practice in times past; that there will be no poor debts. The demands of the profession as presented to the British Medical Association are as follows:

"1. An income limit of two pounds a week for those entitled to medical benefit.

2. Free choice of doctor by patient, subject to consent of doctor to act.

3. Medical and maternity benefits to be administered by Insurance Committees and not by friendly societies. In connection with the question of the method of administration of medical benefit, the Representative Meeting resolved that all questions of professional discipline should be decided exclusively by a body or bodies of medical practitioners, and that the power of considering all complaints against medical practitioners should be vested in the local Medical Committee, with a right of appeal to a central Medical Board to be appointed for that purpose.

4. The method of remuneration of medical practitioners adopted by each Insurance Committee to be according to the preference of the majority of the medical profession of the district of that Committee.

5. Medical remuneration to be what the profession considers adequate, having due regard to the duties to be performed and other conditions of service.

After careful consideration the Representative Meeting resolved that the policy of the Association be to claim, 8s. 6d. (\$2.12) as a minimum capitation fee, not including extras and medicine, for members of approved societies, and to claim the recognition of payment per attendance, in which case the fees must be on such a basis as shall be deemed an equivalent by the State Sickness Insurance Committee, with recognition of a two pound maximum income limit.

6. Adequate medical representation among the Insurance Commissioners in the Central Advisory Committee and in the Insurance Committees and statutory recognition of a local Medical Committee representative of the profession in the district of each Insurance Committee."

The action of the Association in rejecting the final proposals of the government has raised a storm of abuse of the medical profession by the liberal papers. They profess to believe that the balloting was more or less a bluff and that the doctors will eventually accept the rates of compensation offered. In lieu of the failure to do this, the government threatens to establish a State Medical Service. It is not understood that the vote of the Association was binding on the members individually and it is probable that enough of them will consent to work under the act to make it successful. It is significant that not one-half of the Association members took the trouble to vote. The difference between the government and the physicians will certainly be adjusted in time by concessions on one side or both and all such minor details as those of fair compensation, the administration of the law, and the rigid supervision of medical colleges by the government will be settled in some way or other. The situation in Great Britain is of unusual interest in that it recognizes the duty of society as represented by the government to furnish medical and surgical treatment to those who are unable to get it for themselves. In other words, it recognizes the practice of medicine as a social and not a private business and looks upon the doctor as the health officer of the state working for the general good for which, of course, he must be fairly paid. This is a principle which is becoming more and more clearly recognized and the practical application of which will unquestionably have to be faced in this country some time. The state already claims the right to determine the qualifications of most of the medical profession and in an indirect way regulates the standard of teaching in medical colleges. This is a long step toward the view of the situation which is being worked out in Great Britain.

Ross in the *British Medical Journal* of December 14th reports the discovery of certain intracellular parasites in the blood and fluids from the lesions of syphilitics. These parasites are found extracellular and in the large mononuclear leucocytes and pass through a series of developmental stages which culminate in the production of twisted spirochaete-like bodies which are presumably identical with the spirochaeta pallida. Bodies of this same sort are found in guinea pigs and earth worms. If these observations are confirmed, it would seem that at last the life history of those organisms has been fully worked out and that its classification as a protozoic parasite has been proven. We anticipate that this work of Ross will tremendously stimulate further investigations of this problem.

MEMBERS OF VERMONT STATE MEDICAL SOCIETY, REVISED TO JAN. 15, 1913.

ADDISON COUNTY.

MEMBERS.

E. G. Blaisdell.....	Bridport
F. T. Briggs.....	Bristol
O. M. Bump.....	Salisbury
D. J. Carroll.....	Vergennes
G. P. Collins.....	Ferrisburg
P. L. Dorey.....	Middlebury
M. H. Eddy.....	Middlebury
S. S. Eddy.....	Middlebury
G. F. Edmunds.....	Bristol
C. W. Howard.....	Shoreham
E. H. Martin.....	Middlebury
A. M. Norton.....	Bristol
L. F. A. Ouellet.....	Orwell
F. C. Phelps.....	Vergennes
E. Philon.....	Vergennes
Mary M. Pratt.....	Shoreham
R. W. Prentiss.....	Middlebury
F. E. Read.....	Salisbury
F. M. Rogers.....	Vergennes
L. B. Rowe.....	Orwell
I. P. Sharon.....	Shoreham
E. A. Tobin.....	Bennington
H. L. Townsend.....	Bridport
V. M. Waterman.....	Vergennes
W. J. White.....	Middlebury
*G. F. B. Willard.....	Vergennes
H. L. Williamson.....	Bristol

*Deceased.

BENNINGTON COUNTY.

MEMBERS.

C. W. Bartlett.....	Bennington
F. E. Dean.....	South Shaftsbury
L. E. Hemenway.....	Manchester
L. J. Calahan.....	Manchester Ct.
J. I. Cochran.....	E. Dorset
L. M. Kelley.....	Manchester Ct.
A. E. Houle.....	Bennington
F. C. Liddle.....	Dorset
L. H. Ross.....	Bennington
E. V. Trull.....	Manchester
J. B. Woodhull.....	North Bennington

CALEDONIA COUNTY.

MEMBERS.

W. J. Aldrich.....	St. Johnsbury
J. M. Allen.....	St. Johnsbury
W. C. Blake.....	Lyndon
D. R. Brown.....	Lyndonville
Winifred O. Brown.....	Lunenburg
A. A. Cheney.....	Lyndonville
C. A. Cramton.....	St. Johnsbury
E. M. Crane.....	Hardwick
J. C. Breitling.....	Lunenburg
H. G. Bullard.....	St. Johnsbury
G. W. Darling.....	So. Ryegate
E. E. Dickerman.....	West Burke
H. A. Elliott.....	Barnet
C. Fairbanks.....	St. Johnsbury
F. E. Farmer.....	St. Johnsbury
W. B. Fitch.....	St. Johnsbury
G. B. French.....	Concord
J. M. Gibson.....	McIndoes Falls
R. T. Johnson.....	West Concord
F. C. Kinney.....	Greensboro Bend
H. H. Lee.....	Wells River
A. J. Mackey.....	Peacham
H. H. Miltimore.....	St. Johnsbury
R. M. McSweeney.....	St. Johnsbury
C. A. Prevost.....	St. Johnsbury
W. N. Ricker.....	Wells River
E. H. Ross.....	St. Johnsbury
F. Welsh.....	St. Johnsbury
C. C. Wallace.....	Lyndonville
C. B. Wilson.....	Bradford

CHITTENDEN COUNTY.

MEMBERS.

B. D. Adams.....	Burlington
L. Allen.....	Burlington
B. J. Andrews.....	Burlington
J. A. Archambault.....	Essex Junction
F. J. Arnold.....	Burlington
F. W. Baylies.....	Burlington
C. H. Beecher.....	Burlington
W. D. Berry.....	Burlington
*L. M. Bingham.....	Burlington
G. H. Branch.....	Grand Isle
E. T. Brown.....	Burlington
Lester R. Brown.....	Burlington
T. S. Brown.....	Burlington

*Deceased.

E. H. Buttles.....	Burlington	H. H. Johnson.....	Franklin
N. J. Caron.....	Burlington	E. R. Lape.....	Swanton
W. G. Church.....	Burlington	E. P. Lunderville.....	Richford
F. E. Clark.....	Burlington	S. H. Martin.....	Georgia
I. S. Coburn.....	Milton	F. W. Mason.....	St. Albans Bay
C. F. Dalton.....	Burlington	E. J. Melville.....	St. Albans
J. H. Dodds.....	Burlington	A. O. Morton.....	St. Albans
O. N. Eastman.....	Burlington	F. W. Norris.....	Swanton
W. H. Englesby.....	Burlington	S. W. Paige.....	St. Albans
R. C. Flagg.....	Essex Center	J. R. Patten.....	Fairfield
D. D. Grout.....	Waterbury	R. N. Pelton.....	Richford
D. C. Hawley.....	Burlington	J. G. Perrault.....	St. Albans
E. A. Heath.....	Winooski	H. L. Pierce.....	Swanton
A. S. C. Hill.....	Winooski	C. S. Scofield.....	Richford
L. C. Holcombe.....	Milton	Grace Sherwood.....	St. Albans
H. D. Hopkins.....	Waterbury	A. A. Skeels.....	St. Albans
Sue E. Howard.....	Burlington	W. J. Upton.....	St. Albans
M. H. Hunter.....	Essex Junction	E. L. Washburn.....	East Berkshire
J. A. Hunter.....	Essex Junction	R. E. Welch.....	Franklin
G. B. Hulburd.....	Jericho		
F. K. Jackson.....	Burlington		
J. N. Jenne.....	Burlington		
C. K. Johnson.....	Burlington		
R. W. Johnson.....	Burlington		
E. F. Jones.....	Hinesburg		
Barnet Joseph.....	Burlington		
Henry Ladd.....	Essex Center		
E. S. Lane.....	N. Ferrisburg		
W. A. Lyman.....	Burlington		
David Marvin.....	Essex Junction		
L. B. Morrison.....	Burlington		
S. L. Morrison.....	Burlington		
N. W. MacMurphy.....	Burlington		
P. E. McSweeney.....	Burlington		
W. S. Nay.....	Underhill		
C. A. Pease.....	Burlington		
C. N. Perkins.....	Burlington		
G. F. Rist.....	Burlington		
G. M. Sabin.....	Burlington		
F. W. Sears.....	Burlington		
D. A. Shea.....	Burlington		
F. R. Stoddard.....	Shelburne		
B. H. Stone.....	Burlington		
J. D. Tanner.....	Burlington		
W. T. Tilley.....	Richmond		
H. C. Tinkham.....	Burlington		
E. G. Twitchell.....	Burlington		
M. C. Twitchell.....	Burlington		
H. R. Watkins.....	Burlington		
J. B. Wheeler.....	Burlington		

FRANKLIN COUNTY.

MEMBERS.

C. G. Abell.....	Enosburgh Falls
W. B. Arnold.....	St. Albans
C. E. Allen.....	Swanton
G. C. Berkley.....	St. Albans
A. M. Brown.....	Enosburgh Falls
E. M. Brown.....	Sheldon
G. S. Clark.....	Montgomery Center
A. L. Cross.....	Swanton
A. Davidson.....	St. Albans
John Gibson.....	St. Albans
W. W. Hutchinson.....	Enosburgh Falls
E. A. Hyatt.....	St. Albans
C. U. Johnson.....	West Berkshire

LAMOILLE COUNTY.

MEMBERS.

H. W. Barrows.....	Stowe
G. L. Bates.....	Morrisville
C. W. Bates.....	Morrisville
L. P. Holcomb.....	Johnson
W. M. Johnstone.....	Morrisville
C. S. Leach.....	Hyde Park
G. B. Maurice.....	Waterville
R. G. Prentiss.....	Johnson
G. C. Rublee.....	Wolcott
S. G. Start.....	Cambridge
J. M. Stevens.....	Hyde Park
A. J. Valteau.....	Morrisville

ORLEANS COUNTY.

MEMBERS.

G. F. Adams.....	West Derby
F. N. Aldrich.....	Derby Center
J. F. Blanchard.....	Newport
A. M. Butterfield.....	North Troy
J. C. Colby.....	Stansstead, P. Q.
C. L. Erwin.....	Newport Center
R. A. Gatchell.....	West Charleston
A. M. Goddard.....	Albany
O. B. Gould.....	Newport
F. R. Hastings.....	Barton
B. D. Longe.....	Newport
H. E. Somers.....	West Derby
R. M. Wells.....	Barton Landing
W. H. White.....	North Troy
R. F. Willard.....	Coventry
J. F. Wright.....	Barton Landing
W. A. Young.....	Westfield

RUTLAND COUNTY.

MEMBERS.

E. L. Averill.....	Brandon
O. C. Baker.....	Brandon
C. F. Ball.....	Rutland
A. H. Bellerose.....	Rutland
C. H. Bonney.....	Ludlow

W. N. Bryant.....	Ludlow	G. S. Bidwell.....	Waterbury
C. S. Caverly.....	Rutland	A. B. Bisbee.....	Montpelier
E. R. Clark.....	Castleton	L. W. Burbank.....	Cabot
O. F. Clough.....	Poultney	C. H. Burr.....	Montpelier
B. D. Colby.....	Sudbury	C. F. Camp.....	Barre
S. A. Cootey.....	Wallingford	F. H. Carter.....	Plainfield
T. A. Cootey.....	Rutland	H. S. Carver.....	Marshfield
M. R. Crain.....	Rutland	C. E. Chandler.....	Montpelier
N. J. Delahanty.....	Rutland	M. L. Chandler.....	Barre
J. J. Derven.....	Poultney	E. A. Colton.....	Montpelier
J. S. Eastwood.....	Brandon	E. E. Ellis.....	Brookfield
E. D. Ellis.....	Poultney	J. P. Gifford.....	Randolph
J. W. Estabrook.....	Brandon	V. C. Goodrich.....	Barre
C. A. Gale.....	Rutland	L. W. Hanson.....	Barre
F. H. Gebhardt.....	Rutland	W. R. Harkness.....	Montpelier
O. J. Gilchrist.....	Rutland	H. H. Hayward.....	Tunbridge
C. E. Griffin.....	Fair Haven	W. H. Howard.....	Waitsfield
W. H. Grinnell.....	Danby	C. E. Hunt.....	Montpelier
J. B. Guiltinan.....	West Rutland	J. W. Jackson.....	Barre
T. H. Hack.....	Proctor	Henry Janes.....	Waterbury
T. Hagan.....	Pittsford	J. H. Judkins.....	Northfield
E. J. Hall.....	Rutland	W. E. Lazell.....	Barre
J. M. Hamilton.....	Rutland	L. L. Leonard.....	Barre
S. W. Hammond.....	Rutland	W. Lindsay.....	Montpelier
J. D. Hanrahan.....	Rutland	M. E. McGuire.....	Montpelier
L. A. Heidel.....	Rutland	L. A. Newcombe.....	Montpelier
J. S. Horner.....	West Pawlet	G. H. Parmenter.....	Montpelier
E. J. Kibbe.....	Pittsford	W. D. Reid.....	Barre
W. C. Klotz.....	Pittsford	C. J. Rumrill.....	Randolph
R. Lape.....	Fair Haven	L. A. Russlow.....	Randolph
H. L. Manchester.....	Pawlet	E. G. Sprague.....	Barre
M. J. Mangan.....	Rutland	E. A. Stanley.....	Waterbury
G. G. Marshall.....	Wallingford	F. E. Steele.....	Waterbury
H. L. Martyn.....	Cuttingsville	O. G. Stickney.....	Barre
J. H. Miller.....	Wallingford	W. J. Tindall.....	Montpelier
R. H. Miner.....	Windsor	W. D. Turner.....	Worcester
W. H. Morehouse.....	Fair Haven	W. L. Wasson.....	Waterbury
J. P. Newton.....	Benson	E. B. Watson.....	Williamstown
G. D. Parkhurst.....	Fair Haven	H. L. Watson.....	Montpelier
C. W. Peck.....	Brandon	H. A. Whitney.....	Northfield
C. C. Perry.....	West Rutland	J. H. Winch.....	Northfield
W. S. Pomeroy.....	Danby	J. H. Woodruff.....	Barre
E. M. Pond.....	Rutland		
C. B. Ross.....	West Rutland		
G. Rustedt.....	Rutland		
H. R. Ryan.....	Rutland		
R. H. Seeley.....	Castleton		
Wm. Stickney.....	Rutland		
C. W. Strobell.....	Rutland		
J. E. Thomson.....	Rutland		
W. W. Townsend.....	Rutland		
E. L. Tracy.....	Pittsfield		
E. O. Whipple.....	Danby		
J. H. Woodward.....	New York City		
C. B. Warren.....	West Rutland		

WASHINGTON COUNTY.

MEMBERS.

F. C. Angell.....	Randolph
F. X. Z. Archambault.....	Barre
N. E. Avery.....	E. Barre
A. C. Bailey.....	Randolph
E. H. Bailey.....	Graniteville

WINDHAM COUNTY.

MEMBERS.

E. S. Allbee.....	Bellows Falls
G. R. Anderson.....	Brattleboro
J. H. Blodgett.....	Bellows Falls
E. S. Bowen.....	Brattleboro
W. D. Bowen.....	Saxtons River
E. R. Campbell.....	Bellows Falls
I. R. Doane.....	Springfield
L. H. Gillette.....	Springfield
G. H. Gorham.....	Bellows Falls
J. W. Gregg.....	Brattleboro
H. P. Greene.....	Brattleboro
F. Hamilton.....	Brattleboro
W. F. Hazelton.....	Bellows Falls
J. S. Hill.....	Bellows Falls
H. D. Holton.....	Brattleboro
G. B. Hunter.....	Brattleboro
S. E. Lawton.....	Brattleboro

J. F. McGinity.....	Ludlow
A. I. Miller.....	Brattleboro
A. L. Miner.....	Bellows Falls
F. L. Osgood.....	Saxtons River
F. L. Osgood.....	Townshend
L. T. Page.....	Wilmington
C. S. Pratt.....	Brattleboro
J. T. Rudden.....	Bellows Falls
H. Tucker.....	Brattleboro
P. P. White.....	Williamsville

WINDSOR COUNTY.

MEMBERS.

J. D. Brewster.....	Windsor
A. C. Eastman.....	Woodstock
T. F. Gartland.....	White River Junction
C. H. Hazen.....	Springfield
Geo. G. Kelley.....	Woodstock
C. W. Kidder.....	Woodstock
F. T. Kidder.....	Woodstock
V. M. Rogers.....	Quechee

NEWS ITEMS.

Dr. Emile D. Melville, U. V. M. 1912, has opened an office in Manchester, N. H.

Dr. Dennis L. Nlock, Dartmouth, 1910, has commenced practice in Manchester, N. H.

Dr. Walter A. Bartlett, Dartmouth, 1911, has been given the position of superintendent of the Emergency Hospital of the Amoskeag Corporation at Manchester, N. H. The hospital is new and takes care of the minor injuries and sicknesses of the nearly 18,000 employees of this company.

Dr. H. Press from New York City has located in Manchester, N. H.

Dr. Maurice H. Richardson of Boston left an estate valued at \$242,601, of which \$218,831 is in personal property according to the inventory just filed.

Dr. E. J. Casey of North Woodstock, N. H., died Dec. 2nd of pneumonia after only five days' sickness.

In an editorial recently, a New York paper says, speaking of the self restraint of the

Chinese: "In 1907 the so-called 'ten year agreement' provided that the English Government would reduce the quantity of opium sold in Calcutta for export to China 10 per cent. every year until the traffic in it ceases entirely and that China would diminish its production at the same rate. In this radical manner the two governments proposed to curtail the supply gradually until it was entirely cut off, and thus effectually abolish the opium habit."

From this article the practitioner can readily see why the price of opium preparations is higher.

Except Yale, Harvard and Johns Hopkins all large institutions in the country have raised their tuition fees and now Johns Hopkins announces that hereafter its fees will be raised to those who enter the medical school.

RECIPE.

Feeling seedy, he went to his doctor,
And here's the advice he got:
"Indian clubs are good for the liver,
Bohemian clubs are not."

MORE FIGURES ABOUT AN OLD ENEMY.

The housekeepers in Bellevue and Allied Hospitals have had their accounts for 1912 cast up, with the same disquieting result that ensues in other establishments—the disclosure of an increased cost for supplies over 1911. Yet there are bright spots in this generally discouraging record, for in some things there was an actual saving. For the sake of cheerfulness we put first the articles that were cheaper in 1912 than in the preceding year:

Article.	Cost, 1912.	Cost, 1911.	Decrease.
Milk and cream	\$56,150.00	\$58,456.25	\$2,306.25
Poultry	19,105.00	20,129.64	1,024.64
Provisions	8,464.70	8,847.00	382.30
Bread and rolls	12,613.88	14,018.05	1,404.17
Ice	6,222.00	6,450.75	228.75
Soaps, &c.	8,489.96	8,934.38	444.42
Toilet articles	2,535.84	2,623.93	88.09
Hardware	921.93	948.97	27.04
Rubber goods	1,428.95	2,171.66	742.71
Dry goods	12,498.31	14,648.47	2,150.16
Stable supplies	535.30	670.63	135.33
Uniforms	2,141.25	2,390.55	249.30
X-ray supplies	2,434.20	3,278.74	844.54

The domestic consumption of X-ray plates and tubes is small, but in these days no encouraging sign should be neglected. We cannot enlighten our readers as to what the classification "provisions" includes, but "poultry" and "milk and cream" are intelligible to all. Now for the gloom of things higher in price:

Article.	Cost, 1912.	Cost, 1911.	Increase.
Meat	\$67,238.05	\$60,839.88	\$6,398.17
Fish	6,828.30	6,774.70	53.60
Fruits, &c.	18,558.00	18,162.12	395.88
Beverages	10,304.32	9,071.01	1,233.31
Dairy products	64,732.70	57,411.12	7,321.58
Canned fruits	12,417.14	10,880.93	1,536.21
Dried fruits	4,805.06	4,518.75	286.31
Groceries	11,660.59	10,470.28	1,190.31
Cereal food	4,674.78	4,369.46	305.32

The net increase in cost for 1912 over 1911 was 2.71 per cent., prices being figured on the same quantities. The greater cost of living drove the hospital trustees to the Board of Estimate for more money, and there must be a sale of special revenue bonds for their benefit.

BOOK REVIEWS.

AN INTRODUCTION TO THE STUDY OF INFECTION AND IMMUNITY. Including Serum Therapy, Vaccine Therapy, Chemotherapy and Serum Diagnosis.—By Charles E. Simon, M. D., Professor of Clinical Pathology and Experimental Medicine, College of Physicians and Surgeons, Baltimore. Octavo, 301 pages; illustrated. Cloth, \$3.25 net. Lea & Febiger, Publishers, Philadelphia and New York, 1912.

The remarkable development of our knowledge on the subject of infection and immunity together with the wonderful application of the knowledge to the domain of diagnosis and treatment renders any treatise on the subject of unusual interest. Dr. Simon has covered the subject to date with thoroughness and clearness. Every practitioner should own his work.

LABORATORY METHODS WITH SPECIAL REFERENCE TO THE NEEDS OF THE GENERAL PRACTITIONER.—By B. G. R. Williams, M. D., and E. Z. C. Williams, M. D. Illustrated with forty-three engravings. St. Louis: C. V. Mosby Co.

This book is a most excellent work for what its title indicates. It details with clearness and precision such laboratory tests as are perfectly practical for the practitioner with comparatively little apparatus. To such, the larger works on

Laboratory Technique are discouraging as most of them presuppose an amount of apparatus out of the range of any but the professional laboratory man and detail a multiplicity of methods confusing to the last degree to the man with limited time. Furthermore the interpretation of laboratory results is given with a very happy simplicity.

A TEXT-BOOK UPON THE PATHOGENIC BACTERIA AND PROTOZOA. For Students of Medicine and Physicians.—By Joseph McFarland, M. D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia. Seventh edition, thoroughly revised. Octavo of 878 pages, 293 illustrations, a number of them in colors. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, \$3.50 net.

The author and publishers of this popular authority on the subject—the Pathogenic Bacteria and Protozoa—are to be commended on the way in which they meet every new advance in our knowledge with new editions. The popularity and deserving popularity is amply attested by the fact that they are able to publish already seven editions of so large and comprehensive a work as this.

A MANUAL OF AUSCULTATION AND PERCUSSION, EMBRACING THE PHYSICAL DIAGNOSIS OF DISEASES OF THE LUNGS AND HEART, AND OF THORACIC ANEURYSM, AND OF OTHER PARTS.—By Austin Flint, M. D., LL. D., Late Professor of Medicine and of Clinical Medicine in the Bellevue Hospital Medical College, etc., New York. Revised by Haven Emerson, A. M., M. D., Associate in Physiology and in Medicine, College of Physicians and Surgeons, Columbia University, New York. 12mo, 361 pages, illustrated. Cloth, \$2.00 net. Lea & Febiger, Philadelphia and New York, 1912.

This little book on physical examination, especially with reference to Auscultation and Percussion is a most useful book. It gives facts clearly stated but free from verbosity, just the kind of book for the busy practitioner.

A TEXT-BOOK OF OBSTETRICS: Including Related Gynecologic Operations.—By Barton Cooke Hirst, M. D., Professor of Obstetrics in the University of Pennsylvania. Seventh Revised Edition. Octavo of 1013 pages, with 895 illustrations, 53 of them in color. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, \$5.00 net; half morocco, \$6.50 net.

Hirst's Obstetrics has long been a standard text-book on this subject. The seventh edition has been carefully brought up to date, and while the same general arrangement has been maintained the whole subject matter has been carefully revised.

Diseases of Women is still retained in the work and is an exceedingly well prepared section. The work is deserving of the confidence it has received by physicians generally.

DISEASES OF THE STOMACH, INTESTINES, AND PANCREAS.

—By Robert Coleman Kemp, M. D., Professor of Gastrointestinal Diseases, New York School of Clinical Medicine. Second edition, revised and enlarged. Octavo of 1021 pages, with 388 illustrations. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, \$6.50 net; half morocco, \$8.00 net.

Diagnosis of Diseases of the Stomach, Intestines and the Pancreas is often so difficult that a careful discussion of these diseases apart from general medicine is very opportune. This work is based upon large experience and the second edition brings a greater wealth of knowledge based upon longer clinical study and recent investigations.

Much new matter has been included in this edition, this is especially noticeable in the discussion of infections with colon bacillus diseases of the pancreas and duodenal ulcer. Visceral displacements and their treatment, either surgical or medical, is an important subject carefully discussed.

The merits of the book make it worthy of the confidence of the profession.

A TEXT-BOOK ON THE PRACTICE OF GYNECOLOGY. For Practitioners and Students.—By W. Easterly Ashton, M. D., LL. D., Professor of Gynecology in the Medico-Chirurgical College of Philadelphia. Fifth edition, thoroughly revised. Octavo of 1100 pages, with 1050 original line drawings. Philadelphia and London: W. B. Saunders Co., 1912. Cloth, \$6.50 net; half morocco, \$8.00 net.

This well known work on Gynecology has gone through five editions since written in 1905. The fifth edition just out is a careful revision of the book to make it conform to the latest ideas of the treatment of these conditions. Many changes have been made in the discussion of the

blood in its relation to surgery, the treatment of gynecological conditions by X-ray, and the treatment of cancer of the uterus and vagina. Syphilis is discussed in the light of recent discovery and the use of salvarsan. The work is revised to include a discussion of the latest and best ideas of gynecologists. It is well written, profusely illustrated and is in every way a thoroughly first class work on this subject.

INTERNATIONAL CLINICS.—A quarterly of illustrated clinical lectures and especially prepared original articles on treatment, medicine, surgery, gynecology, pediatrics, orthopedics, pathology, dermatology, ophthalmology, otology, laryngology, hygiene and other topics of interest to students and practitioners. Vol III. Twenty-second series, 1912, price \$2. J. B. Lippincott Co., Philadelphia and London.

Volume III, Twenty-second series of the International Clinics has interesting articles on the treatment of Chronic Lobar Pneumonia, Onset of Lobar Pneumonia, Differential Diagnosis of Ulcer of the Duodenum, Diagnosis of Cancer of Hollow Viscera of the Abdomen, and Flat Foot in Adults. It also contains the usual number of articles on various subjects. It is a particularly useful number.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

CATHETER KNOTTED IN THE BLADDER.

W. J. ANDERSON, Chicago (*Journal A. M. A.*, June 22), reports an accident illustrating a dangerous possibility in the use of a soft rubber catheter. The patient had been using such an instrument on account of a supposed enlarged prostate. He had mislaid the catheter and purchased a section of rubber tubing, cutting its end obliquely and using it for the same purpose. He found himself, however, unable to withdraw it and later was able to pass a very small amount of bloody urine around it but not through it. A radiograph showed it knotted in the bladder and it was removed by suprapubic cystotomy. It was found in an unclassifiable knot in which it had tied itself after introduction into the bladder. The risk of such accidents, he remarks, would be probably greater in the female, in whom lengths of rubber tubing can be introduced without difficulty.

INCOMPLETE ABDOMINAL SURGERY.

H. G. WETHERILL, Denver (*Journal A. M. A.*, June 22), makes a plea for larger incisions and more thorough examinations in abdominal surgery. Special

and regional surgery in limited fields has, he says, been responsible for such results in most instances, the operation being based on a more or less specific diagnosis, correct as far as it goes, but which ignores possible obscure complications. In operations for appendicitis through a small "gridiron" incision, serious pelvic lesions, gall-stones, gastric and intestinal lesions, etc., have been often overlooked and the patient is hardly better after the operation although the diagnosed lesion has been removed. Every one who proposes to undertake abdominal operations of any kind should feel it his duty to be prepared to meet any conditions which may be found in the abdomen and should not close it up, except in an emergency, until he has ruled out any possible coincident or correspondent pathologic condition. Certain noted exceptions to this rule may be admitted, as in operations for intestinal perforation, appendicitis or salpingitis, in which injection would be diffused, or in ectopic pregnancy with rupture, or cesarean section. In such cases a definite diagnosis is usually possible and the emergency such that the particular trouble diagnosed is alone to be considered. He quotes from a similar plea by Dr. Moore (*Journal A. M. A.*, Sept. 16, 1911), and goes on to point out how important it is to remember the frequency of gall-bladder disease in women when performing gynecologic operations, and that certain physiologic pelvic conditions may give rise to profound stomach disorders. Tuberculosis, cancer, enteroptoses, stomach or intestinal perforations, volvulus and intussusception or other forms of intestinal obstruction, rupture of the uterus, bladder or vagina, diverticula, gall-stones, pancreatitis, etc., may accompany any other condition and complicate any abdominal operation one undertakes. Exact and complete pre-operative diagnosis in certain areas of the abdominal cavity can never be made with exactness and this is particularly so in the upper right quadrant where the gall-bladder, ducts and liver are closely grouped and may be all matted together. He reports cases illustrating such possibilities, and says that regional abdominal surgery in limited fields has had its day.

PELLAGRA.

J. E. KNIGHT, Waycross, Ga. (*Journal A. M. A.*, June 22), gives a history of a family ten members of which were subjects of pellagra, the father so seriously affected that mental symptoms ensued, and he was sent to an asylum, June, 1911, where he remains unimproved. In April, 1912, his wife and eight children were found also affected; the only one not having the disease was the baby, 2 years old. A specimen of the corn-meal used by the family was examined and found unfit for human consumption. Corn in all forms was prohibited, intestinal antiseptics used, and at present, May, 1912, all are doing nicely.

METHOD OF DIFFERENTIAL LEUKOCYTE COUNTING.

PHILIP ATLEE SHEAFF, Philadelphia, (*Journal A. M. A.*, June 22), reports that in a recent case of splenomyelogenous leukemia in which the leukocytes approached 350,000 per c.mm. the great abundance of white cells in the stained spread made an accurate differential count almost impossible. After some delay, however, the task was easily and accurately carried out by cutting a square from the

end of the microscopic slide of just the exact size to fit within the eyepiece and rest on its diaphragm. With a glazier's diamond, and by the most delicate pressure, four lines were ruled parallel with each side of the square and forming a small square in the center. This, when placed in the eyepiece, the lines being down, gave the outline of a small square on the stained spread and within the usual round field and permitted the easy and accurate counting and classification of cells within its borders, the slide being moved to include a new lot in proximity to the first, and the operation repeated as often as necessary until the total number of cells required for the count has been made.

TYPHOID IN ST. CHARLES, ILLINOIS.

St. Charles, Ill., is a town of between four and five thousand population, about forty miles west of Chicago. No cases of typhoid were reported in the place from 1907 to 1911. Sixty cases, however, were reported to the health department during the eight months preceding May 12, 1912. The town is situated on both sides of the Fox River and derives its water-supply from two wells 800 feet deep. The following facts were ascertained by the special commissioner of *The Journal* (June 22): A little west of the town is a settlement of about 150 recent immigrants from Belgium, and among these the first case occurred, Oct. 18, 1911. It was difficult to carry out sanitary measures among these people, and this first case, of which the cause is unknown, was responsible for thirteen others. The water-supply was found safe, as reported by the State Water Survey. Three of the seven families in which typhoid appeared were on the same milk route, but no cases appeared among customers in other parts of the town. The cases here are regarded as generally contact cases. Typhoid in St. Charles was confined to the Belgium community until the middle of January, 1912. From that time to the middle of May there were forty-four new cases through the main part of the town on both sides of the river. The milk-supply is handled principally by two dealers. No history of typhoid could be obtained among the workers on the farms supplying the milk nor in the dairies. Of the six cases of typhoid developing among families not using milk from these two supplies, two were probably contact cases and three of the others were accustomed to taking meals irregularly at lunch rooms using milk from the dairies. The reasonable explanation of the two epidemics is found most probably in the neglect of washing sufficiently the empty bottles after the milk had been used by the families on one of these milk routes which also supplied the Belgium community. These bottles are liable to be taken up indiscriminately by the collectors, and thus the supply from the other dairy became infected. The institution of proper sterilizing apparatus in the dairies supplying milk checked the spread of the disease.

A SPECIALIST IN MEDICINE.

G. E. SHAMBAUGH, Chicago (*Journal A. M. A.*, June 15), defines the real specialist in medicine as one who has placed himself well in advance in his particular line. We are inclined, however, to use the term too loosely and the practitioner who essays to restrict his practice to any particular field thinks

he has the right to be called a specialist, hence the undesirable commercial specialist and the multiplication of untrained specialists in certain departments. He does not specially commend the postgraduate schools, but says they are doing just what is demanded of them. The fundamental training of any bona-fide specialist should be for research—for investigation. The discreditable condition at present in this regard, however, is, he says, only temporary, and the remedy is to be looked for in the growth of the university idea in medical education. The real undergraduate instruction should be taken up by the university in courses provided for the medical specialist, which should cover two or three years at least after graduation and might very properly lead to a higher degree. At present we attempt to offer only the purely clinical side of this subject in the postgraduate school, and the surprising thing is that under these conditions we should have developed in this country so large a body of really scientific specialists as we have.

ANIMAL EXPERIMENTATION.

W. B. CANNON, Boston (*Journal A. M. A.*, June 15), summarizes the evidence that has been presented in detail in pamphlets published by the Bureau for the Protection of Medical Research of the Council on Health and Public Instruction of the American Medical Association. He discusses the antivivisectionists' methods, pointing out that their literature for years has been characterized by frauds and trickery and evil insinuations. He answers their argument—that the methods of animal experimentation are immoral even if they have brought about some benefit to the human race—by saying that they are certainly not more so than the daily utilization of these creatures for our benefit to which no sensible person objects. They are performed with due regard to the avoidance of pain, which the antivivisectionists deny, though it has been repeatedly proven. The objections to the legislation proposed for inspection and restriction are that it is not these alone that are sought for, but the absolute abolition of all animal experimentation as the ultimate end desired. The agitation for "mild" restriction in some of the measures proposed is properly objected to as the initial move toward the ultimate suppression aimed at.

HOOKWORM AND IMMIGRATION.

M. W. GLOVER, Angel Island, Cal. (*Journal A. M. A.*, June 15), gives the results of a study of the occurrence of hookworm in oriental immigrants at the port of San Francisco. Between the dates Sept. 23, 1910, and Nov. 30, 1911, the stools of 2,255 aliens were examined microscopically for parasites, and of these 1,077 were found to contain the eggs of either the *Necator americanus* or the *Ankylostoma duodenale*. After November, 1910, he has records also of the findings of other parasites. During the period from Sept. 23, to Nov. 28, 1910, the largest number of Hindus were examined, and 63 per cent. were infected with the hookworm. They were, however, remarkably free from other parasites, in striking contrast to the Chinese and Japanese. Tabulated statements are given of the findings of Chinese, Japanese and Hindu males and females respectively, as regards the appearance of parasites of all kinds,

and more especially of the hookworm. In drawing conclusions it must be remembered that only the comparatively young immigrate and that the instances of parasites, of hookworm especially, are influenced by this fact, the larger number of infected cases being found in the younger ages, as a rule. The highest percentage was in the ages between 15 and 30, though this was not uniformly so. The greater prevalence of hookworm in Japanese females is accounted for by the fact that most of them are from the country and most of them have been accustomed to working barefoot in the fields, while the Chinese women are mostly the wives and daughters of merchants or are housewomen. The Japanese are mostly selected cases, as they immigrate to become the wives of Japanese men already in this country and are what are locally known as "picture brides," the marriage having been recorded in Japan by photographs. It is very seldom that a serious case of hookworm is seen among these immigrants, but an experienced eye can readily recognize the symptoms. There is a certain amount of anemia, apparently best noticed in the lips, a peculiar muddy complexion, often with listless faces, and a lusterless appearance of the hair characterizing the hookworm infected in San Francisco. The evidence points strongly to the fact that hookworm must be very prevalent in Japan, and this is borne out by the examination of fifty-three Japanese coolies transhipped through San Francisco to Tahiti, of whom forty-eight were found infected. In conclusion Glover calls attention to the important influence that Oriental immigration may have on the medical history of our country.

CHICKEN SARCOMA.

In this, the third paper of their series, ROUS, MURPHY and TYTLER (*Journal A. M. A.*, June 15), discuss the relationship between the avian growth and its cause. A suspension in Ringer's solution of particles of the fresh neoplastic tissue was injected intravenously into a number of susceptible, normal fowls, and at short intervals these fowls were killed and portions of the lungs examined in serial section. The mode of formation of the lung-tumors was in this way traced. It was found that they uniformly arose by a survival and growth of the injected tumor cells, with penetration of the vessel-wall and extension of the surrounding tissue. The visceral metastases of the sarcoma, occurring in the ordinary course of the disease, appear first and most frequently in the lungs. This rule is subject to exception much more rarely than in the case of human tumors metastasizing by the blood-stream. In only five of 157 fowls with visceral metastases were the lungs free of sarcoma and the further organs affected. In these cases, unfortunately, a patent foramen ovale was not looked for; but in two similar ones occurring since these statistics were compiled the abnormality was present. Forty-one of the 157 fowls had metastases in the lungs alone; in 111 the lungs and other viscera were affected, often with very numerous secondary growths. In connection with these experiments such a distribution is strong evidence for a general origin of the metastases from cell-emboli, which latter, as usual, are sieved out of the circulation by the pulmonary capillaries. There is, however, the alternate possibility that the extrinsic agent, as such, engenders tumors more easily in the lungs than in other organs. That this is not

the case is shown by the results of direct intravenous injection of a Berkefeld filtrate containing the causative agent. In only two of eleven fowls developing a growth after such treatment was the sarcoma primary in the lungs, despite the fact that the agent was carried in bulk directly to these organs. In seven of the cases diatomaceous earth had been added to the filtrate and had lodged for the most part in the pulmonary capillaries, there producing injury such as has been found to favor the agent's action.

BLOOD CULTURES IN PNEUMONIA.

Studies of the bacteriemia which occurs in many cases of pneumonia are reported by H. W. LYALL, Brooklyn (*Journal A. M. A.*, June 15). The investigations here reported were made on the cases coming under his observation during the season 1911-1912 in the routine bacteriologic work at the Long Island College Hospital. Only cases that could be definitely diagnosed clinically as pneumonia are included and, unless otherwise noted, were unilateral. The blood was taken from the arm with due antiseptic precautions and the mediums used are described. All were neutral to phenolphthalein, which seems to be the optimum reaction for the growth of pneumococci and streptococci. The medium that gave the best results was the dextrose-calcium-carbonate broth without the addition of any enriching fluid, which was apparently sufficiently supplied by the blood. A table of the results obtained in forty-five cultures is given, and the points which seem to be of greatest interest in the investigation are summarized as follows: 1. In this series, characterized by a low total death-rate, blood cultures were positive in only 40 per cent. 2. The total number of cases was forty-two, of which seventeen, or 40.5 per cent., were positive and twenty-five, or 59.5 per cent., were negative. The total mortality was eleven, or 26.19 per cent.; five patients who died were alcoholics. The positive cases showed a mortality of eight, or 53.5 per cent., among which were four alcoholics. The negative cases showed a mortality of three, or 8 per cent; one patient who died was an alcoholic. On account of the incidence of alcoholism it is difficult to draw any definite conclusions as to the relation between positive findings and prognosis. 3. All cases at the time of or after crisis or lysis gave uniformly negative results. 4. Calcium-carbonate broth seems to furnish a most suitable medium for the growth of pneumococci and streptococci and possesses an additional advantage over solid mediums of securing a sufficiently high dilution of the blood. 5. In three cases organisms which are to be classed as streptococci were obtained in pure culture. These did not show any of the characteristics of *Streptococcus mucosus capsulatus*.

RETENTION CATHETER.

A simple device for holding a retention catheter in place is described and illustrated (*Journal A. M. A.*, June 15), by W. S. ENRICH, Evansville, Ind. He cuts the finger of a thick rubber glove lengthwise so as to divide it into four parts up to one-half inch of the tip, where a very small hole is left, through which the catheter is to pass. One-eighth inch from the end of each strip a slit about three-eighths of an inch long is made. From some other part of the glove is then cut a strip five or six inches long

and three-eighths of an inch wide and a little wider at one end to allow the other end to be passed through after having been threaded through the four strips of the first piece. This can be drawn fairly snugly behind the corona and holds the catheter in position. This device can be made in about a minute and has the advantage over adhesive strips in that it can be removed, tightened or loosened, as required.

HEALTH AND LONG LIFE.

W. H. CRISP, Denver (*Journal A. M. A.*, June 15), reviews Dr. George Cheyne's "Essay of Health and Long Life," the fourth edition published in 1725, the date of the first edition being unknown to him. He gives an account of Dr. Cheyne (1671-1743), one of the leading physicians of his time and, as his work shows, a good medical observer. It commences with the commonly quoted saying, often attributed to Benjamin Franklin, as current in his time "that every man past 40 is either a fool or a physician," and continues with his other, "most men know when they are ill but very few when they are well." Crisp gives abstracts or quotations from chapters of the book pointing out the common sense instructions and the points where Cheyne agrees with the best modern ideas, though his phraseology and capitalizations are quaint to a modern reader. The paper is interesting reading.

MYASTHENIA.

A case reported to the Philadelphia Neurologic Society, but heretofore unpublished, is reported (*Journal A. M. A.*, June 15), by D. RIESMAN, Philadelphia: A man in good health, suffering only from a cold, was suddenly seized with profound weakness involving apparently all the voluntary muscles, causing no psychic, sensory or sphincteric disturbances but marked by bradycardia, subnormal temperature and bradypnea. A facial palsy ensued ten days after the onset of the myasthenia. Recovery was complete in about two months. The case was at the time a puzzling one and Riesman was inclined to account for it by a temporary insufficiency of the adrenals, which seemed to be supported by experimental facts. Two other cases somewhat similar which recently came under his observation and an experience of his own while a medical student are also reported. In all these cases there was a physical weakness amounting to actual prostration, a feeling of coldness, a subnormal temperature and in two cases slow pulse and low blood-pressure. Recovery was prompt in all, though the feeling of impending death was quite acute during the attack. Riesman finds their easiest explanation in the assumption of some disturbance of the internal secretions causing changes in the sympathetic system and voluntary muscles. The chief controller of these two systems is the adrenal or, better, the chromaffin system. The functions of this system are manifold and complicated, but the two that particularly concern us in this connection are the angiotonic controlling vascular tone and blood-pressure, and the antitoxic through which the fatigue products of muscular activity are neutralized. No definite clinical picture has been established of mild temporary insufficiency of these functions. In recent literature, however, there are included observations of various actual fatal conditions in which autopsy found destructive changes different from those of Addison's disease in the adrenals. Several

types of these cases have been noticed, those characterized by shock, gastro-intestinal symptoms, bradycardia, lumbar pain and death; the asthenic type in which the predominant feature is profound asthenia, fatal in a few days; cases of sudden death in which only a destructive lesion is found in the gland; a nervous type marked with convulsions, coma and delirium; and a doubtful one with hemorrhage in the adrenals and hemorrhagic eruptions elsewhere. The glandular theory of myasthenia gravis has been recently supported by various writers and the tendency nowadays is to look to the glands of internal secretion for its cause.

MILK AND SORE THROAT.

JOSEPH A. CAPPS and JOSEPH L. MILLER, Chicago (*Journal A. M. A.*, June 15), report the incidence of a recent epidemic of streptococcus sore throat in Chicago. It was conservatively estimated that over 10,000 persons in Chicago were victims of epidemic sore throat. Of the total of 622 cases that were investigated, 539, or 87 per cent., were users of milk from a certain dairy—Dairy X. Of nineteen fatal cases investigated, fifteen, or 79 per cent., were users of this milk. A comparison of the prevalence of sore throat among consumers of X milk with that of consumers of milk from another dairy in the same neighborhood showed that the morbidity ratio was fourteen times as great among the former as among the latter. This ratio prevailed in three widely separated districts of the city. Of a total of 153 nurses in hospitals using X milk, eighty, or 52 per cent., were attacked with sore throat, while of a total of 721 nurses in hospitals using other milk, only thirty-five, or 4.8 per cent., were affected. Returns from seventy counties in the State of Illinois indicate in many communities a prevalence of tonsillitis, but only one locality reports an epidemic comparable to the Chicago outbreak in extent and severity. This locality is Batavia, where the X milk is collected from the dairy farms and pasteurized. Batavia is partly supplied with X milk. An epidemic of mastitis involving 4.6 per cent. of the cows supplying milk to the Dairy X occurred during the winter months and was worst about the Christmas holidays. Sore throat of the epidemic type was prevalent among the farmers and milkers supplying Dairy X. Often bovine mastitis and human sore throat prevailed on the same farm at the same time. A virulent streptococcus was isolated by Dr. Davis from the milk of a cow with chronic mastitis and from the throat of a girl on the same farm, who had been ill with sore throat and arthritis. The pasteurization records reveal a remarkable degree of failure to maintain a proper temperature. The days on which the most striking failures of pasteurization occurred shortly preceded the great outbreaks of sore throat. The remedy is to be found in more careful inspection of cows and milkers, and, most important of all, in efficient pasteurization by the holding method.

MILK AND EPIDEMIC SORE THROAT.

According to DAVID J. DAVIS, Chicago (*Journal A. M. A.*, June 15), the epidemic of sore throat in Chicago in the winter of 1911-1912 was caused by an organism belonging to the streptococcus group. In the exudates and in the body it was usually encap-

sulated, but not infrequently in the throats a capsule was not present. It was highly pathogenic for animals, readily producing arthritis in rabbits and occasionally endocarditis. The work of Capps and Miller shows clearly that the infection was largely milk-borne and that an epidemic of mastitis in cows and sore throat in farmers prevailed during the winter in the vicinity of Batavia, Ill., the territory which supplied the contaminated milk. From a typical case of mastitis in a cow from a farm in this region a streptococcus was obtained pure which was pathogenic to animals, became encapsulated on animal passage and agreed in all essential respects to the human epidemic streptococcus. A coccus identical in morphology, in culture and in pathogenicity was obtained from a human case of tonsillitis and arthritis on the same farm. The relation of these streptococci to the common hemolytic variety, *Streptococcus pyogenes*, is certainly very close. They may be identical, the differences noted being caused by environmental factors. The fact should be emphasized that streptococci, which cause mastitis in cows, may be pathogenic for animals and virulent to man.

ASPECTS OF MORPHINISM.

C. C. WHOLEY, Pittsburgh (*Journal A. M. A.*, June 15), notices certain aspects of morphinism some of which he thinks are not mentioned in the usual works on the subject. He remarks that in the morphinist we have a very different personality than we have in the alcoholic. An original neuropathic predisposition is not nearly so universal and the self control is much more fully lost. The physiologic and psychic effects are very different. The tolerance of morphinists to this drug and to others of the same general class, including chloroform and alcohol, is striking, and Wholey is inclined to credit it to acquired greater oxidizing power of the system. He gives instances of patients taking as much as sixty grains daily by the mouth or twenty-five grains by the needle. One of his patients attempted to end the struggle which he had been making to break off the habit by taking a grain of strychnin at bedtime, and, finding this ineffectual, took an additional grain and a half the next evening. He woke somewhat refreshed but with a contempt for strychnin as a poison. It has been said that delirium tremens has been sometimes caused by morphin, but he does not credit this, though delirium may sometimes occur with hallucinations and delusions, but they do not have the stamp of *mania a potu*. The marked difference between the sexes as regards morphin is noticeable. The women usually quickly outstrip the men in the quantity of drug used. It affects both the same in reducing the sexual feeling. A peculiar psychic condition is mentioned by Wholey which he thinks is not always recognized; an amnesic condition similar to that produced by alcohol may occur in morphinists. One of his patients was three weeks in such a state and Wholey was satisfied that, in this particular instance, the memories which constituted the reigning personality at the time were a grouping of all the patient's most objectionable associations, states and reflexes. He emphasizes that in these amnesic or clouded states close personal watch and the best hygienic conditions should be maintained until the complete mental clearness has returned—sometimes for a period of weeks. This, he thinks, destroys the possibility of the success of

the so-called "three-day" cures of the morphin habit. The symptoms on withdrawal are similar in the majority of cases. The word cramps is most often used in describing symptoms and they are located all over the body, most and longest in the legs. As in alcoholism or syphilis, so in morphinism, we see on the mental side the most lately acquired faculties affected first. It is often the long-lasting withdrawal symptoms and not the craving for the drug that brings about relapses.

A CASE OF ACRANIAL MONSTER.

H. A. SILARPE, Mount Vernon, Wis. (*Journal A. M. A.*, June 15), reports the case of a woman, aged 38, who was always healthy and had had six previous pregnancies without dystocia. Her family history was negative. She was eight and one-half months pregnant and had had pains for thirty-six hours, which had not become severe until 6 p. m. At the onset the pains were an hour apart and lasted from ten to twenty minutes. After catheterization, I found an immensely pendulous and distended abdomen, and palpation revealed nothing relative to fetal parts except the possibility of a cephalic presentation. Internal examination revealed a well-effaced cervix and an os admitting one finger. Completely covering the os was a "placenta-like" structure. Palpation through the effaced cervix revealed the bony structure of the fetal head above the pelvic brim. The patient was anesthetized and prepared for manual delivery, the cervix yielding readily to manual dilatation. Careful examination revealed the fetal membranes between the examining finger and the placenta-like structure, which proved to be an encephalocele. On rupturing the bag of waters, quantities of amniotic fluid rushed out and collected. Slight traction brought forth a dead fetus. The amniotic fluid collected measured exactly $24\frac{1}{2}$ quarts. An adherent placenta was removed and the patient made an uneventful recovery. The trunk and extremities of the fetus were normal. The cranium showed absence of the occipital and both parietal bones and an encephalocele, covered by a thin transparent membrane.

TUBERCULOSIS AND OBSTETRICS.

Cases of tuberculosis that become active during pregnancy are considered by C. S. BACON, Chicago (*Journal A. M. A.*, December 21), who estimates the number of such in the United States to be between 22,000 and 44,000 each year. The effect on pregnancy is slight if the patient gets through the first three months well she may even improve in her general condition, though some authorities hold that there is always increase of the tuberculosis process during pregnancy. Bacon cannot admit this, but says that it is an acknowledged fact that the conditions are aggravated during the puerperium and in bad cases death may be hurried within a few weeks. There are two problems in the prophylaxis—the prevention of pregnancy in a tubercular woman and the prevention of infection in a pregnant one or one liable to become pregnant. The latter is likely to be overlooked and is very important. The chief danger to the woman is infection from her husband, and there is nearly as much reason why a tubercular man should not marry as why a tubercular girl should not. The prevention of pregnancy in a tuber-

culous wife can be accomplished by strict abstinence, by the use of measures to prevent conception and by sterilization. Of course, we advise the first, but we cannot feel sure of it. Preventive measures are generally failures. Artificial sterilization is not immoral in itself and not open to the objections to abortion. Whatever operation is performed it is important that the written consent of both husband and wife be obtained to avoid possible future legal complications. In nulliparæ, or women with but one child, only a temporary sterilization is advisable. If both partners are tuberculous, vasectomy in the male may seem most reasonable and safer. The justification of abortion in a tuberculous woman depends on the correctness of the assumption that it is necessary or life-saving to the woman, and Bacon thinks that it is difficult to assume this with any certainty, and the life of the fetus ought also to be considered. The watchful care of pregnancy must be doubled in tuberculosis and, as before said, there is still greater risk in the puerperium of aggravation of the infection already in the system. After birth of the child there is danger of infection from the mother, and when possible a healthy wet-nurse should be employed. If not possible, the child, if strong, may be fed judiciously with milk, and if nursed at all by the mother the milk had better be pumped from the breasts. The added strain of nursing on the mother may be a good reason often for forbidding it. Bacon believes that there should be special sanatoria and dispensaries for tuberculous mothers, before and after confinement, who cannot well be cared for at home. A children's department for their children under 4 years of age, and, as a rule, already infected should be attached to the maternity hospital. This would be attacking the problem at its source.

INTRADURAL SPINAL ROOT ANASTOMOSIS.

C. H. FRAZIER and C. K. MILLS, Philadelphia (*Journal A. M. A.*, December 21), report a case, the first so far as they know, of the operation of intradural anastomosis of the first lumbar of the third and fourth sacral spinal nerve root successfully accomplished for the relief of paralysis of the bladder, and discuss the application of the same method to the other paralytic affections. The patient had suffered a severe traumatism from the explosion of a gas tank, at first causing complete paraplegia, including incontinence of urine and feces. In a few weeks the paraplegia and accompanying anesthesia largely disappeared, but the patient was left with an absolute incontinence. Seven weeks after the operation he reported slight improvement, and in a note received since the preparation of the paper, he reports that the improvement had markedly advanced. The identification of the various roots by faradization was simpler than had been anticipated. The anastomosis was effected on the left side only. The authors describe the nerve-supply of the bladder and make some practical suggestions in regard to the operation. In future cases they will make sure of the position of the vertebrae by the X-ray before the operation and, as suggested by Dr. E. M. Williams, have the bladder filled with boric solution and a small manometer connected with the catheter so as to aid the identification of the sacral nerve roots when stimulated. They found the method of administering the anesthesia by intratracheal insufflation safer and more convenient than the drop method. To avoid the harmful influence of manipulation of

the nerve roots and to prevent shock-producing tendencies, they established a block by applying 4 per cent. stovain solution to the cord just above the site of their manipulations. As regards the application of the operation to other paralytic troubles, they give a table of possible anastomoses of nerve roots as deduced from studies on the cadaver. It is in paralysis of the bladder and rectal sphincters, however, that they see the greatest indication for the method. Owing to the shortness of time that has elapsed since their operation, they submit their paper as a preliminary report.

PREDEMENTIA PRAECOX.

W. R. DUNTON, JR., Towson, Md., (*Journal A. M. A.*, December 21), describes the earlier symptoms of adolescent insanity, commonly called dementia praecox. It is generally admitted that it may occur in the normal individual from special stress or disease as well as in the defective and predisposed. The predementia state is the early stage where the possibility of arrest of disease is greatest. Usually an "outbreak" of some sort calls the attention of the family or friends to the condition but some time elapses before proper treatment is instituted. Dunton admits that the diagnosis may often be difficult but he has found a much abbreviated association test to be of considerable value. He quotes from Jelliffe and Moore as to the symptoms and types of the conditions and the importance of recognition of these subjects by physicians and teachers. We all know children who have done well in their studies up to a certain point, after which mental failure has begun. Some of these cases may be due to overwork and the question of their prevention is an important one. Under ideal conditions every school should be under the observation of a specially trained psychologist, as well as a physician, to oversee the physical and mental welfare of the pupils, and many cases would even then slip by. Dunton emphasizes the value of the Binet test in these early cases which are rarely seen by the alienist until after the patient is suffering from an acute mental attack. The opportunity of their recognition comes first to the teacher, next the family physician, later, perhaps, the neurologist, and lastly, the mental specialist. Occasionally a case comes under his care in the prodromal period and he may be so fortunate as to abort it. After the acute attack much can be done by reeducation, especially along the lines of manual training, even if perfect restoration to normal is impossible.

CYANOSIS IN DEMENTIA PRAECOX.

W. B. CORNELL, Hathorne, Mass. (*Journal A. M. A.*, December 21), has studied 241 patients with dementia praecox in the Danvers Hospital for the Insane, and found 78 per cent. to show some grade of cyanosis, from a mild degree to an extreme dusky purple. It was usually most marked over the dependent parts, yet the skin as a whole is often bluish, especially on the upper back. The relative frequency of the involvement of the hands, feet and back is as 9:6:5. It may occur on the feet and not on the hands, and is sometimes most marked on the face and lips. It varies from day to day without regard to position or temperature. In the catatonic form, 90 per cent.; in the hebephrenic type, 75 per cent., and in the paranoid, 50 per cent., were more or less cyanotic, and the intensity varies in the same order.

The symptoms have some prognostic significance, the worst cases becoming most rapidly demented. Acute catatonic excitement with marked cyanosis forecasts grave danger of collapse and death. It may serve also to differentiate between dementia praecox and acute manic insanity, in which it is exceptional. He also thinks it would be of use in the differentiation of imbecility from dementia praecox. As to the nature of this cyanosis, he does not find it dependent on blood-pressure, but it is certainly a vasomotor indication. He sums up as follows: "A cutaneous cyanosis is found in a large majority of dementia praecox cases, most frequently and intensely in the catatonic form, next in order in the hebephrenic and then the paranoid. It is part of a generalized vasomotor disturbance, consisting in a phlebotasis of unknown origin. Cyanosis is variable within large limits, even in the same patient. Cyanosis offers a valuable diagnostic sign in differentiating dementia praecox from manic-depressive insanity, imbecility, hysteria, constitutional inferiority and occasionally the organic psychoses."

CHOLECYSTITIS.

Two cases of acute primary cholecystitis presenting certain unusual features are reported by N. W. JONES, Portland, Ore. (*Journal A. M. A.*, December 21). Both patients were large, heavily built men of intemperate habits, who had suffered from pains in the upper abdomen during several years prior to the attack, which came on suddenly with fever and delirium and soon ended fatally in coma. In neither case was there a previous history of typhoid. The autopsies showed an acute gangrenous inflammation of the gall-bladder without perforation. The gall-bladder was filled with thick black bile. In one patient there was evidence of old cholecystitis and the presence of six small gall-stones. It is quite evident, Jones says, that the picture of both cases is dominated by an intense general toxemia starting from the gall-bladder, but what caused this intoxication or the type of the infection was not shown. The absence of secondary peritonitis was noteworthy. Jones notices a similarity between the symptoms of these cases and those sometimes observed in acute appendicitis and acute pancreatitis. He thinks they indicate the importance of immediate exploration with the appearance of such early delirium, etc., in any acute abdominal condition whether localizing signs are present or not.

URINARY CALCULI.

M. KAHN, New York, and J. ROSENBLOOM, Pittsburgh, (*Journal A. M. A.*, December 21), publish their analyses of twenty-five renal calculi and two cystic calculi, showing that the former are composed almost entirely of calcium salts while the cystic calculi are composed almost entirely of uric acid. These agree with the observations of English observers. It has been the custom to recommend the alkaline solutions as solvents for renal calculi and the lithium salts have had a great reputation. These analyses show the necessity of changing our therapeutics. The usual antacid treatment is the opposite of what is usually indicated for the calcium concretions which are deposited in alkaline mediums and dissolved by acids. They recommend that all calculi obtained by operation or otherwise should be sub-

jected to chemical analysis and the treatment guided accordingly.

MEDICAL EDUCATION IN SOUTH AMERICA.

J. FRANK, Chicago (*Journal A. M. A.*, December 21), reports his observations of medical education and medical schools in Argentina, Brazil and Venezuela. While the Brazilian medical schools have in former years been a low grade as compared with those in Argentina, Uruguay and Chili, and the average in our own country, they are now endeavoring to place themselves on a par with the best in South America. In Argentina the status of medical education and practice is higher than in Brazil; the regular medical course covers seven years, with no postgraduate schools. Many students finish their studies in Paris and Berlin, and Frank thinks some of them might come to the United States if the advantages were duly shown. The profession is not overcrowded, but not much encouragement is given to outside practitioners. Quacks are scarce and government regulations are rigid. Venezuela is the most backward of the countries visited; it has only two small medical schools giving a three years' course, and the curricula and requirements are below par. Frank notices the usual lack of up-to-date nursing in South America hospitals and the absence of training schools. He also remarks on the sanitary reforms that have been made in the seacoast cities of late years. These are largely due, he thinks, to the fact that medical men are at the head of many South American municipalities, and he suggests that it would be better for us if the same were true here.

HIGH PERCENTAGE ALBUMIN FEEDING.

F. C. NEFF, Kansas City, Mo. (*Journal A. M. A.*, December 21), gives his experience with a modification of the Finkelstein albumin milk method of infant-feeding. He calls his preparation high percentage albumin milk, which is made of a quart of churned-up artificial buttermilk made with a lactic-acid ferment and reinforced by the addition of the precipitate, fat and casein from a quart of sweet milk. The object was to obtain a milk that could be used in a transition from Finkelstein's formula or from buttermilk. It has a higher sugar, casein and caloric content than Finkelstein's albumin milk. The infants on which it was used were all under 6 months of age at the time the feeding was begun. All were continuously observed. Many of them had not gained on breast-milk and none on sweet milk. All had shown stationary weight; most of them had had undigested stools and many had various degrees of atrophy. Sixteen cases in all are reported. The results are given as follows: "Just why the high percentage in this buttermilk mixture which I am using has been easily tolerated, as evidenced by the uniformly good stools, frequent gain in weight and absence of fever, is hard to say, but the reason probably lies in the increased digestibility from the presence of buttermilk and from the freedom of over-feeding by caloric control, while at the same time the infant is getting sufficient. Heim and John, however, at Budapest have recently reported good results from the use of a casein-enriched sweet milk. Nine of the sixteen patients showed good gain in weight, a few of these being quite marked. Two showed loss and two only slight gain. One of the former was the most atrophic in the series. In all

of the cases the good effect on dyspeptic stools occurred. Three infants remained constipated. As long as the infant continued to gain it was kept on this food. Some gained with or without addition of sugar." A tabulated statement of these results is appended to the paper.

INFANT WELFARE MOVEMENT.

The relation of the present active movement for infant welfare to pediatrics forms the subject of an article by T. B. COOLEY, Detroit (*Journal A. M. A.*, December 21). He thinks it offers a special opportunity for preventive cooperation, and the educational work of mothers and nurses is most important. It is the right, he says, of the pediatricist to properly guide this work; it cannot be left safely to nurses alone. Its future rests with the pediatricists. In return it will do much toward giving the specialty the recognition and prominence it deserves. Besides broadening the field it occupies, it is opening up a special branch of pediatrics, and there will soon be a considerable demand for men of training to direct the work on a large scale. It will also emphasize the importance of better teaching in pediatrics. It offers the pediatricist a change to demonstrate on a large scale the possibilities of breast-feeding, and when this fails, of simple bottle-feeding without resort to proprietary foods. It will enable us to perfect bottle-feeding in normal children, and by stimulating a close study of the causes of infant mortality, this infant-welfare movement will add greatly to our pediatric knowledge. The opportunity must not be neglected, and physicians who treat children should take an active part in the organization seeking to control and guide it.

CARBOHYDRATES IN INFANT-FEEDING.

H. D. CHAPIN, New York (*Journal A. M. A.*, December 21), describes the effects of carbohydrates in the system, and discusses their adaptation to infant-feeding. When an infant is strong and vigorous it has plenty of glycogen in its tissues and liver and milk-sugar, which is the slowest to produce glycogen, acts well, not overtaxing the liver or causing alimentary glycosuria or abnormal fat production. When the child is weak or poorly nourished, on the other hand, its reserve of energy is small and rapid glycogen production is called for. For such infants dextrose or maltose, which can be taken directly into the blood and converted at once into glycogen, are more effective. Maltose is especially available, since it is one of the forms through which all the carbohydrates pass before they are utilized in the body, and it can be changed into glycogen, either in the tissues or in the liver, as occasion demands. By adding products of starch digestion, such as dextrin or maltose, to an infant food, we produce the same digestive effect, as we produce in the adult by a thorough mixture with saliva by thorough mastication. The physical condition of the food has marked effects on its nutritional value, even if it is completely digested, in expending energy in digestion. When infants are fed cow's milk the problem of energy expenditure is modified by the physical conditions of the milk after being clotted by the gastric secretion, and the necessity of altering the curd of cow's milk is generally recognized. Conditions vary so with individual infants that Chapin believes that

the best method of preparing food for them is to use milk as a basis, or top milk diluted with cereal gruels of definite strength for the mechanical effect on the curd of the milk, and then by altering the character of the carbohydrates adapt them to the digestive requirements of the individual infant. "These methods are simple, inexpensive and almost universally applicable, but they must be applied with an understanding of the purposes various carbohydrates serve in nutrition. They consist essentially in using gruels made from various cereals as a starting-point, and then by means of diastase converting the starch into soluble starch, dextrin or maltose, as may be required. The extent of the conversion of the starch is to be regulated by the digestive ability and needs of the infant. A nearly complete conversion into maltose is indicated when rapid assimilation is desired. To obtain the maximum amount of maltose the conversion should take place at about 150 F., but when soluble starch and dextrins are sought, the temperature should be about 165 F."

HYSTERIA.

After noticing the different definitions of hysteria by authorities, T. A. WILLIAMS, Washington, D. C., (*Journal A. M. A.*, December 21), gives cases exemplifying the mechanism of hysteria affected by suggestion, and next discusses the alleged trophic symptoms which he considers due to physical agencies operated by the patient. At least no satisfactory evidence has been produced to the contrary. The attempts that have been made to account for the genesis of hysterical symptoms are next noticed. The explanation which commands the most notice, he says, is that of Freud, who ascribes it to a mental conflict which has arisen as a result of painful experiences. Williams points out that Freud himself admits having overestimated the effects of sexual causes which has been made so much of by some of his followers. He still attributes, however, the psychosis of obsessions and phobias and also the anxiety neurosis to direct perturbations of the sexual functions, but he no longer imputes to this immediate cause what he calls hysteric symptoms, which he admits to be purely psychogenic. He tries to explain these by the subconscious effects of forgotten circumstances, the memory of which can be recalled by his "free association" method, consisting in placing the patient in a tranquil attitude and inducing him to think aloud about the events of his illness, and urging him to push his recollection still further back. Other means of recalling memories are the association test of Jung and the psychic galvanic reaction of Veraguth, which has been proved by Sidis to be an electromotive muscular change during emotion, occurring only during contraction. The hypnoidization of Sidis seems to Williams closely similar to the method of Freud. All these methods are alike in the element from outside stimuli with mental concentration on the line indicated by the physician. The patient reenacts his experiences as he would in his dreams. From all the facts Williams thinks it should be apparent that the preliminary finding of the causative idea is essential to the certain and permanent removal of a hysteric symptom. Empiric methods are of no use, as they only strengthen the patient's belief in his symptoms. The search for this cause and its discovery suffice sometimes to remove the symptom, but it does not cure the disease; the reeducation of the patient's hysterizability is needed.

Williams does not think that the prolonged isolation, overfeeding, massage, electrical applications and special nursing are essential. The neurasthenic symptoms which are induced by a fixed notion of illness soon disappear when the patient's ideas are rectified, as one of his cases illustrate. The patient must learn his own psychology and the dependence of his bodily health on his mental state. He must also learn that body and mind are only two sides of only one thing and must practice himself under the physician's direction in learning to avoid the conditions that are hurtful to him. Hysterizability varies with bodily states, and while hysteric symptoms are always psychogenic, they have a mechanism the knowledge of which will enable the clinician to discover their origin and remove it.

SCOLIOSIS.

E. A. GRAY, Chicago (*Journal A. M. A.*, December 21), defines scoliosis as a lateral deviation of the spinal column associated with a rotation of the bodies of the vertebrae around the vertical axis. He details the methods of examination and speaks particularly of the percussion signs that characterize the scoliotic chest when disease of the lungs does not coexist. Percussing the upper portion of the chest behind we find the higher pitched note on the side of the vertical convexity and marked resonance on the concavity both in the upper and lower portions. Anteriorly we percuss the areas of compensatory angulation and obtain a short high-pitched note as compared with the sound elicited from the flattened chest wall on the opposite side. A fourth more or less inconstant high-pitched area is found diagonally across the front of the chest from the infraclavicular area to the left of the sternum. In intensity the high-pitched areas rank as follows: First, posteriorly, opposite superior vertebral convexity; second, anteriorly, over the infraclavicular region; third, posteriorly, below, opposite lower vertebral convexity; fourth (when present), anteriorly, below, diagonally across from superior infraclavicular area. He points out the importance of these percussion notes in the diagnosis of pulmonary disease. With pleural thickening they may be found elsewhere also. In early tuberculosis there is usually an area of dullness in front as well as behind on the same side. This is not true of the scoliotic phenomena. In advanced tuberculosis, even accompanied with scoliosis, the areas of high pitch are practically never schematically demonstrable. The upper areas of high pitch in scoliosis may be mistaken for apical catarrh, but in the absence of other data this is doubtful. Diagnostic error in early tuberculosis is usually on the side of omission, but unless other conditions influencing the pitch are remembered a wrong diagnosis of tuberculosis may be given. Gray mentions two cases of this error observed by him.

COCCIDIOIDAL GRANULOMA.

F. H. BOWLES, Oakland, Cal. (*Journal A. M. A.*, December 21), after briefly noticing the cases recorded from that state and the mode of infection and the treatment given, reports the nineteenth case. It was a Japanese farmer who had been working as a teamster in a vineyard and who had been treated for typhoid fever in January, 1911. He was confined in bed two months and toward the latter part of that

time tenderness developed in the right heel with slight swelling, still continuing when he was up and about. In the latter part of March pain and tenderness developed in the left shoulder and later in the left hip, and he was obliged to give up work on account of weakness. When first seen, in July, he was fairly well nourished but seemed ill and suffered from pain, tenderness and swelling in the above-mentioned regions and in the right hand. Incisions were made over the crest of the ilium and over the os calcis posteriorly and curetted and drained. A great deal of pus matter without bacteria or leukocytes came away with necrossed bone and at this time gave no growth on agar. During the six months he was in the hospital other similar lesions developed elsewhere on the body and were similarly treated. There were occasional slight rises of temperature during the latter part of his stay. Fortunately a culture was made again before he left and the causative agent found to be a mold, identified by Dr. William Ophüls of San Francisco as *Oidium coccidioides*. In January, 1912, the patient returned to Japan, where he died two months later. "The Widal reaction was repeatedly negative and the blood-counts showed a slight leukocytosis without increase in the polymorphonuclears. No typhoid bacilli could be found by culturing the urine. The von Pirquet test proved negative, also the Wassermann; but, in spite of the latter, salvarsan was given intravenously, followed by inunctions of mercury and long-continued doses of iodids."

VASOSTOMY.

R. H. HERBST, Chicago (*Journal A. M. A.*, December 21), after first noticing the bacteriology of vesiculitis in which the gonococcus plays the chief part, though it may be caused also by other germs, such as the tubercle and colon bacilli and the pus organisms, says that three distinct conditions are found in this disease. "1. Cases in which the vesicle condition is complicated by a complete obstruction of the ejaculatory duct, which is attributable either to a stricture or to the duct being blocked by detritus and exudation. In this class the vesicle is virtually converted into a retention cyst. 2. Cases in which there is a partial occlusion of the duct, due either to stricture or to inflammatory swelling. 3. Cases in which the duct is perfectly patent and the inflammatory process is limited to the vesicle." While there is little literature in regard to stricture of the ejaculatory duct, it has been both demonstrated in post-mortem and on the living by Belfield. That patency seems to Herbst a most important point to be considered in the treatment and it can be readily demonstrated by stripping in the rectum. Where there is atresia or partial or complete occlusion the only hope of cure is in surgery—vasostomy, incision or excision of the infected organ. Vasostomy is also a valuable measure in the prevention of recurring attacks of acute epididymitis. In cases where there is stricture high up in the vas there is little hope of relief by drainage or lavage. Two points in vasostomy are emphasized. 1. The vas should be well fixed between the posterior outer wall of the scrotum before the incision is made. 2. The vas should be entirely stripped of its sheath before incising it. Herbst believes the operation should be performed on account of the danger of contamination of wife, even if it blocks the vas. His summary is given as follows: "1. Symptoms referred to the bladder

and prostate are frequently relieved by vasostomy. 2. In certain cases vasostomy has relieved symptoms ascribed to an enlarged prostate, just as did castration years ago. 3. Vasostomy is especially indicated in cases in which we have to deal with either a partial or a complete occlusion of the ejaculatory ducts. 4. This operation gives a fairly high percentage of cures in a class of cases which must either be relegated to the incurable heap or be subjected to a far more dangerous and difficult surgical procedure."

DANGERS OF THE CINEMATOGRAPH.

G. M. GOULD, Atlantic City, N. J. (*Journal A. M. A.*, December 21), calls attention to the frequent ocular disturbances occurring in patrons of moving-picture shows. They have been so frequent in his experience that he now makes a routine inquiry in regard to attendance at these shows. The symptoms do not differ essentially from those commonly caused by eye-strain of any kind. The most common, of course, is headache or migraine in some one of its forms. Perhaps the other most frequent symptoms are ocular and cerebral weariness; the patient who has his ametropia corrected is liable to think that his glasses are again at fault. With uncorrected ametropia the symptoms are even more prominent and frequent. The major pathogenic faults of the cinematograph are the shakiness or tremulous movement of the pictures, the lack of swiftness and accuracy of the sequence and superposition of the pictures, the conflict of locations commanding the attention of the eyes and the generally defective illumination. The average rate of exposure of images is usually uniform at about sixteen per second, but the movements as represented are often quickened or slowed without any corresponding rapidity of the movement of the film, thus producing exhaustion of the eye. Better illumination must be demanded. While improvement can probably be obtained in some of these points, Gould thinks it doubtful if singly or collectively they can be entirely avoided. When we consider the investment in the business and its popularity it will be seen that the consequent eye-strain injuries and suffering will be enormous, and there is little likelihood, he says, of their exaggeration by hygienists and physicians.

DIAGNOSIS OF RENAL TUBERCULOSIS.

THORKILD ROVSING, Copenhagen, Denmark (*Journal A. M. A.*, December 21), says that the diagnosis of renal tuberculosis is unfortunately too often delayed. The patient often does not consult the physician until the bladder is also infected, and even then a wrong diagnosis has often been made. A faint albuminuria suggests nephritis and a rigorous diet is ordered which further reduces the patient's condition. Albuminuria need not always be present, even in advanced cases, though its absence is more usual in early ones. Hematuria may be the first conspicuous symptom and tumors may suggest cancer, etc. Hence the need in all cases of a bacteriologic and microscopic, as well as a chemical, testing of the urine. Rovsing thinks that the difficulty of finding tubercle bacilli in these cases has been overestimated, but in any case, if the practitioner using the ordinary microbe stains, finds pus and no bacilli, the diagnosis of tuberculosis is almost cer-

tain, for in all other suppurative kidney disease we find easily colored germs. When the existence of tubercle is ascertained, the next thing is to locate it, whether in one kidney, or in both. Rovsing here does not advise trusting to cystoscopy and segregators but believes in uretero-catheterization and careful study of the urine from each kidney, bacteriologic as well as chemical. With severe tuberculosis of one kidney we may have real albuminuria of the other without it too being tuberculous. In this case the albuminuria is a toxic one and will not be attended with numerous leukocytes and with bacilli. In some cases in which separate catheterization of the ureters is impracticable on account of bladder disease, etc. Rovsing uses his double lumbar exploratory incision. He has done this in thirty cases without losing a patient and in twenty-five of them ascertained the one-sidedness of the disease which was impossible by any other method. Rovsing has no faith in the so-called kidney-functioning examinations, but finds that normal secretion of urea is a safe criterion of a sufficiency of functioning kidney tissue, but that a reduced function does not necessarily signify inadequacy. It suggests caution but no more. He does not believe in conservative medical treatment or in reserving surgery for late one-sided cases. Now, when by nephrectomy it is proved by statistics that 75 per cent. of operated patients recover, it is clear that that operation is indicated as soon as the diagnosis of a unilateral kidney tuberculosis is made. Generally speaking, a cure is possible whenever the original point of infection can be radically removed and the other kidney is sound. Rovsing goes into detail on this point and on the operation to be performed; the mortality in his hands has been low, only 3.8 per cent. in 131 nephrectomies since 1901, most of them far advanced in the disease. His technic and postoperative treatment are described and several case histories are appended.

TUBERCULOSIS.

G. S. WHITESIDE, Portland, Ore. (*Journal A. M. A.*, December 21), says that there are frequent tuberculous conditions in urogenital tuberculosis in which either all the operative surgery has been done that is advisable or in which surgery is contra-indicated for a time or altogether. Four cases of these classes treated with tuberculin are reported in which the results were more or less successful. He does not think that treatment of any case in any stage by tuberculin is as satisfactory as we could wish and some cases in which pulmonary infection also exists are hopeless under any treatment. He believes that tuberculin preparations are mainly aids to surgical and other treatment and may be disappointing even in competent hands. If used without good judgment as to dosage they may do irreparable harm. It is necessary to be cautious and patient in the treatment, but the symptoms of the patient carefully observed and properly interpreted will have to be the guide.

DECAPSULATION OF THE KIDNEY.

The operation of kidney decapsulation has been studied by D. S. FAIRCHILD, Clinton, Iowa (*Journal A. M. A.*, December 21). He says that the limited resources of medical treatment in kidney disease have especially called the attention of the surgeons to these disorders and have induced surgical pro-

cedures which have little scientific basis. The merits of the decapsulation operation, therefore, can be determined only by the study of a large number of cases and not by theoretical reasoning. The operation has not been absolutely empirical, however. It rests on the assumption that it relieves the pressure on the delicate kidney structures and brings about a better condition of the circulation and nutrition. He reviews the literature very extensively, not only as to experimental work, but very fully reproduces views of authorities and gives a résumé of the cases he has collected from the literature. First he takes up cases for the operation of decapsulation in eclampsia. He has found reports of ninety-two cases with definite results by forty-four different operators. Sixty-two of the ninety-two patients recovered and thirty died, which is not far from the percentage of mortality in cases of eclampsia under any treatment, as far as he has been able to ascertain. A fair comparison of statistics is impossible, as it was apparently only desperate cases that were operated on. Fairchild's own personal experience has convinced him also that decapsulation or incision is of great value in selected cases of chronic nephritis not of degenerative type. His personal experience is confined to four cases, which are briefly reported, all of whom were benefited and recovered. In examining the recorded cases Fairchild finds it sometimes difficult to determine from the history whether the case is one of Bright's disease or one of nephritis, and he gives his opinion that there is no theoretical reason why it should be of use in Bright's disease, which he considers unsuitable for surgery. In his complete paper he has collected from the literature the results of decapsulation in 153 cases of nephritis, which are as follows: Recoveries, 70; deaths, 11; improved, 41; not improved, 4; not stated, 27. In conclusion he quotes at length from Edebohls, who reported thirty-three cures in ninety-nine cases in which the results were known, and considers that the operation is the main if not the only hope of a large class of sufferers. The article concludes with what appears to be a very complete bibliography of decapsulation of the kidney.

GLYCOSURIA.

T. B. FUTCHER, Baltimore, (*Journal A. M. A.*, December 21), gives a review of the recent progress in our knowledge of the functions of the ductless glands and their relations to carbohydrate metabolism and glycosuria. He sums up the conclusions from his study as follows: "1. It is unwise, from past experience, to accept as settled any new theory advanced to explain the cause of diabetes mellitus. 2. It must now be accepted as positively proved that not only the pancreas but also the adrenals (chromaffin system), thyroid, parathyroids and pituitary have a very important influence on carbohydrate metabolism. 3. Although lesions of the pancreas have been found in a considerable percentage of cases of diabetes, it is now clear that morbid changes in that organ will not explain all cases, even when alterations in the islands of Langerhans are also taken into account. The essential and primary disturbance may be in one or another of the ductless glands. 4. There is undoubtedly a marked correlation of the internal secretions of the ductless glands. Thus the internal secretions of the adrenals (chromaffin system) and pancreas mutually retard the action of each other. The most recent theory concerning carbohydrate metabolism is that first ad-

vanced by Zuelzer and now supported by many physiologists. According to this view one of the important functions of the adrenals is to 'mobilize' or set free the carbohydrates in the liver and possibly in other storehouses also. Under normal conditions, however, this influence is counteracted or exactly balanced by the hormone contained in the internal secretion of the pancreas, and we have a constant normal flow of sugar from the liver. When, however, the chromaffin system is for any reason overestimated, as it may be through the sympathetic nervous system, there is an overproduction of the 'accelerator' hormone of the adrenals; the 'retarding' hormone of the internal secretion of the pancreas is more than counterbalanced, the glycogen in the liver is rapidly 'mobilized' or set free and a hyperglycemia and glycosuria result. A similar result occurs in the cases of so-called pancreatic diabetes. Here the adrenal hormone may be normal in amount, but owing to the pancreatic disturbance the pancreatic hormone is absent or diminished and again the adrenal hormone is enabled to mobilize the glycogen of the liver. 5. A somewhat analogous explanation may subsequently be found to explain the glycosurias in pituitary and thyroid diseases. 6. The theory that hyperglycemia results from deficient consumption or oxidation of glucose in the tissues has fewer adherents than formerly. It may still be shown, however, that Cohnheim's theory is in part correct. At present the trend of opinion is in favor of the view that the hyperglycemia and glycosuria are dependent on overproduction of sugar in the liver as expressed under Conclusion 4."

BONE AND JOINT TUBERCULOSIS.

HAROLD J. STILES, Edinburgh, Scotland, (*Journal A. M. A.*, February 24), after noticing the deficiencies of his own country, where, through the prevalence of tuberculosis in the dairy cows, surgical tuberculosis is more prevalent than in most countries, and expressing his opinion that much of the expense spent on sanatoriums might better be given to combating bovine tuberculosis, says that there is no doubt that osseous tuberculosis is practically always of hematogenic origin. He points out how the blood-vessels are distributed in the growing bones of children and discusses the morbid anatomy and progress of the disease in the different situations in the skeleton at length. Later he takes up the question of the treatment. The substance of his paper can best be stated in the conclusions which are given. They are substantially as follows: The chief portals of access of the bacilli are the buccal and pharyngeal tonsils, the lungs and intestines, the bacilli being carried to the associated lymph-nodes and thence into the bloodstream. The localization of the disease in the bones is accounted for by the distribution of the vessels, and in children the disease is more frequently met with in the growing ends of the diaphysis than in the epiphysis. The joints most often involved are those with small epiphyses, the elbow and the hip. In the rare cases in which it begins in the epiphysis it does so in those which are large and early ossified, as in the knee. Primary bone foci are more frequently met with at the elbow than at the shoulder or wrist because the nutrient arteries of the arm long bones are all directed toward the elbow, and the frequency of tuberculous dactylitis is also accounted for by the blood-supply of the bones. Tuberculous diaphysitis of the long bones proper is prob-

ably commoner in children than has been supposed and has probably often been mistaken for syphilitic or subacute pyogenic infection. A circumscribed tubercular focus in the metaphysis should be removed if possible by operation before the joint becomes involved, either by gouging or curetting or by subperiosteal resection. The latter is preferable in tuberculous diaphysitis in most cases, except perhaps in the femur. If the metaphysis, as well as more or less of the diaphysis, is involved and the affected portion of bone is divided and wrenched away from the epiphyseal cartilage and latter does not come away with the diaphysis but always adheres to the epiphysis. If this operation is done before the periosteum has become invaded it is capable of completely reproducing the removed portion of bone and in the after treatment it is advisable to apply extension to the leg to keep the periosteal tube on the stretch to prevent shortening and angular deformity. To have a stable weight bearing leg after excision of the head of the femur for tuberculous disease the leg should be kept in the abducted position in the after treatment with the trochanter planted firmly into the acetabulum and the muscles stitched back over it. "In excision of the knee for tuberculous disease, nailing of the tibia to the femur greatly facilitates after treatment and at the same time insures osseous ankylosis in good position, and the same may be said of nailing the foot to the tibia after excision of the ankle. In excising the elbow for tuberculous disease in children, it is often necessary to combine the operation with subperiosteal resection of a considerable portion, either of the humerus or of the bones of the forearm."

GLYCOSURIA IN THE INSANE.

C. EMERSON, Lincoln, Neb., (*Journal A. M. A.*, December 21), discusses the significance of glycosuria in the insane and favors the view that it is due to a cerebral toxemia. The view, he says, that many hold at present, that insanity is a functional disease of the brain due to a toxemia, fits in very well with this view. Mental disturbance is often observed in cases of diabetes, usually in the form of a mild melancholia, and the frequent occurrence of glycosuria in the insane, which has been studied by a number of authorities, indicates a reciprocal action of the brain conditions on the sugar metabolism. He reports a case of apparent melancholia which improved under antidiabetic treatment, and also gives the results of the urine examination in 650 patients in the hospital for the insane at Lincoln, tabulated according to the form of insanity. The largest percentage of glycosuria cases was in involutional melancholia and organic dementia, 22 and 12 per cent. respectively. He sums up by saying that the sugar reaction is frequently obtained in the urine of the insane, especially in melancholia and in cases with organic brain lesions. The condition is usually a temporary one, occurring at more or less frequent intervals or early in the disease. The case illustrates the need of repeated examinations. The permanence of the glycosuria with its attendant symptoms of thirst, polyuria, neuritides and an ammonia output should be considered in the differential diagnosis. The importance of the sugar test must not be underestimated in view of the resemblance of the symptomatic diabetic psychosis and some cases may be curable by antidiabetic treatment.

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THERAPEUTIC NOTES.

COUGHS, COLDS AND CATARRHS.—In all but the most equable of climates, a very large proportion of the population suffers more or less from coughs and colds during the winter months. Many individuals who, at other times, are apparently in excellent health, contract a cold almost as soon as the cold weather commences, and are scarcely convalescent before another attack occurs, until a sub-acute or more or less chronic naso-pharyngeal catarrh is established which is not thrown off until the spring opens. The frequency of such respiratory affections during the winter months is no doubt mainly due to surface chilling from frequent exposure to changes of temperature and the general lack of adequate ventilation of artificially heated houses, stores, offices and schools. Insufficient oxygenation, the longer "housing up" of the individual and the indisposition to open air exercise in cold weather undoubtedly serve to reduce the general vitality and the respiratory mucous membrane becomes less resistant and more readily subject to infective and catarrhal influences. When (as is usually the case) the patient cannot correct the unhygienic conditions referred to, it is the part of wisdom to tone up the general vitality of the patient and thus render his respiratory tract more resistant to morbid influences. This can best be accomplished by prescribing Pepto-Mangan (Gude) as soon as the more acute symptoms have disappeared. A thorough course of treatment with this efficient blood builder and general tonic reconstructive very frequently places the patient in a position to successfully ward off further catarrhal attacks.

A SUBSTITUTE FOR OPIUM.—Owing to its freedom from the narcotic principles of opium, Papine (Battle) is an admirable agent for employment when a sedative effect is desired in the irritability of mucous membranes. By reason of its advantage over opium in being free from opium's constipating property, Papine is widely used in conjunction with expectorants in bronchial inflammations. Since those qualities which serve so effectively in reducing bronchial irritation are retained in Papine, the results of its use in inflammations of the air passages may be expected to parallel those of opium or its alkaloids.

Papine (Battle) possesses the distinct advantage over opium, morphine or heroin, as stated above, in being free from the narcotic and convulsive properties of these agents. It may be advantageously employed whenever opium is indicated, possessing the additional virtue of freedom from the disagreeable side-effects of the latter drug. Papine is simply an opium preparation in the manufacture of which the narcotic and convulsive elements have been eliminated—the finished product containing the analgesic and sedative properties of opium.

NEGLECTED THERAPY OF CONVALESCENCE.—The physician of education and experience, who keeps in touch with the progress of medicine generally, is well informed as to the treatment of most of the "thousand and one" ills that he is called upon to combat. The diagnosis and treatment of acute conditions as well as the successful management of the more chronic affections are subjects which he is constantly inves-

tigating and studying. It so happens, however, that after the dangerous shoals of medical navigation have been successfully negotiated and when the crisis or danger point has been passed, the physician is all too liable to relax his vigilance and to allow the patient to convalesce without sufficient attention to the therapeutic details of this important period. While the feeding of the convalescent is of great importance, the medico-tonic treatment is equally essential, in order to improve the appetite, tone the digestive, assimilative and eliminative functions generally and to hasten the time when the patient shall be once more "upon his feet." Among all of the general re-constituent and supportive measures in the therapy of convalescence, none is more essential than the reconstruction of a blood stream of vital integrity and sufficiency. Pepto-Mangan (Gude) is distinctly valuable in this special field, as it furnishes to the more or less devitalized blood the necessary materials (iron and manganese) in such form as to assure their prompt absorption and appropriation. One especial advantage of administering these hematinics in this form, is that digestive disturbance is avoided and constipation is not induced.

POST-GRIPPA TREATMENT.—In nervous exhaustion resulting from la grippe nothing equals Cord. Ext. Ol. Morrhuæ Comp. (Hagee) in tablespoonful doses before meals for adults.

Recovery of strength rapidly ensues, and relapses, so common in this disease, are prevented.

A POSSIBLE REVOLUTION IN THE TREATMENT OF INFECTIOUS DISEASE.—Are existing methods of treating bacterial diseases to be fundamentally changed? Do the Phylacogens furnish the key to a new and enlightened therapy? Medical and other scientific men are beginning to ask these questions. Less than one year ago the name Phylacogen had not been injected into the language. Today you can scarcely pick up an American medical journal that does not contain some reference to the remarkable group of products for which it stands.

What are Phylacogens? Briefly, they are sterile aqueous solutions of metabolic substances generated by bacteria grown in artificial media. The name Phylacogen (from the Greek) means "phylaxis-producer"—literally, "a guard" and "to produce."

The initial Phylacogens were originated by Dr. A. F. Schafer in 1908, the method of preparation and technique of application being first presented to the San Joaquin Medical Society in Fresno, California, in October, 1910, and later to the San Francisco Medical Society (January 14, 1911). Subsequently the preparation of the Phylacogens was entrusted to Parke, Davis & Co., the work of manufacture being carried on at the company's biological laboratories in Detroit, Michigan.

The principle upon which the use of the Phylacogens is founded is the theory of multiple infections. Three facts are set forth as the basis of the new therapy:

1. Practically all acute and many chronic diseases are caused by the metabolic products of bacteria.
2. The human subject is the host of micro-organisms that are pathologically latent, but capable of setting up a disease process under certain conditions.
3. The growth of infecting micro-organisms can be arrested and their effects neutralized by products de-

rived from their development in artificial culture media.

Five Phylacogens are now available: Rheumatism Phylacogen, Erysipelas Phylacogen, Gonorrhea Phylacogen, Pneumonia Phylacogen, and Mixed Infection Phylacogen (the last named being applicable to the multiplicity of infections which may be said to be of questionable etiology). They are supplied in rubber-stoppered glass bulbs of 10 c. c. capacity and are administered hypodermatically (subcutaneously or intravenously).

Many experienced physicians, representing both private and hospital practice, believe that in the Phylacogens we have the most efficient remedial agents yet devised for the treatment of acute and chronic infections.

NEW BIOLOGICAL LABORATORY.—The handsome building we are illustrating has recently been added to the group of biological laboratories of H. K. Mulford Company at Glenolden, Pa.



The building is constructed entirely from basement to roof of hollow tile and concrete, making it a fire-proof structure throughout.

It is divided into departments, each department being a unit, and complete in itself. The east end of the building is devoted to the handling of serum and globulin products. On the first floor bleedings are received from the bleeding room, serum or plasma is removed from the clot or from the corpuscles, as the case may be, and the product stored immediately in cold-storage rooms belonging to this group.

When the serum or globulin has been tested and is ready to be finished, it is delivered to the group of antitoxin and serum filling rooms. The bulk stock is kept in cold-storage rooms connected with this group. Immediately adjoining the twenty filling rooms is the labeling and packing room for serum and globulin products. This group also has its own cold-storage rooms. Elevators at each end of the building convey the completed packages to the shipping rooms. After inspection and checking off against a duplicate set of records shipments are made.

Each of the twenty filling and serum rooms is supplied with washed and filtered air. The special apparatus used for this purpose is guaranteed to remove 98 per cent. of suspended matter from the air supplied to these rooms. Not only is the air filtered but its humidity and temperature are controlled, thus giving the employees the benefit of the best possible working conditions.



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On each floor glass partitions between the halls and rooms permit the demonstration of the work to visitors without their entering the rooms themselves.

The laboratory floors are of asbestolith. The advantage of this material is that there are no seams or cracks and is impervious to fluids. It partakes more of the nature of wood than of cement and because of a cushiony layer beneath the surface crust, is more acceptable to employees than cement floors.

On the lower floor are the stock rooms. The sterilizing rooms are in a separate building well supplied with ventilating sky-lights.

On the third floor are found the Lecture Room, Library and Museum.

The entire plant is arranged and managed under the unit system. A separate building or group of buildings, or in some cases portions of larger buildings, are devoted to the preparation, standardization, packing and shipping of each product. Each unit is in charge of scientific experts in their particular branch of bacteriology. Cold-storage rooms supplied with cold air from a central refrigeration plant form part of each individual unit arrangement. This makes it possible to keep on hand a large stock of biologicals without danger of deterioration, so that the company is prepared at all times to supply these products and to cope with the enormous demands often created by epidemics of the various infectious diseases.

NEUROSES OF SEXUAL ORIGIN.

The value of Pasadyne (Daniel's Concentrated Tincture of *Passiflora Incarnata*) as a means of control over the nervous manifestations arising from sexual disturbances, does not stop with its positively calmative influence, but is further accentuated by reason of Pasadyne's freedom from danger or even untoward effect. For these reasons—and the second is worthy as much consideration as the first—Pasadyne is being more and more widely employed in the neuroses of sexual origin, in which a calming effect is an urgent need. Pasadyne is the concentrated tincture of *passiflora incarnata* prepared by the same firm and in the same manner for thirty years. Your request for a sample bottle should be addressed to the Laboratory of John B. Daniel, Atlanta, Ga.

MEDICAL ALCOVES.

The United States possesses more than 8,600 libraries containing over a thousand volumes each. There are 2,298 libraries possessing over five thousand volumes each. Of medical libraries there were but 32 in the United States, according to the United States Bureau of Education, Bulletin 1909 No. 5. New York, Massachusetts, Pennsylvania and Ohio contained 19 of these Medical Libraries. In June, 1911, the number of medical libraries had risen to 74 in the United States.* Inasmuch as medical works are costly and become obsolete within very few years, physicians with limited means are not able to ac-

cumulate large private libraries. As physicians are working for the common good it would seem that public libraries might contain medical alcoves. Evanston, Ill., now boasts a medical library that is an intrinsic part of its public library. An endowment fund supplied by private individuals is to be used for the purchase of magazines and books on general medicine and surgery. This appears to be a step in the right direction. There is every reason why cities in which large organizations of medical men are not to be found should rally similarly to the support of the library facilities for the medical profession.

Special works on engineering, art, theology, and general legal subjects are found in profusion in general libraries, while little or no attention has been given to the development of the medical phases of the library system. It would be a progressive step in the right direction for physicians and their friends to raise small endowment funds for the purpose of establishing medical alcoves to be taken up and supported by the municipality. This would be as great a service to the community as the mere giving of library buildings to be supported by the tax-payers. The medical library is an important factor in assisting physicians to reduce the mortality rate. The possession of a medical alcove in a public library would be a distinct asset not alone for the profession but for the city. It forms a postgraduate school, refreshing memory, supplying the newest scientific data, encouraging research, and stimulating thought. The physician in communities possessing medical libraries are to be congratulated because of their literary opportunities. In the words of Osler, "It is hard to speak of the value of libraries in terms which would not seem exaggerated."—*Medical Review of Reviews*.

THE INTERNATIONAL EUGENIC CONFERENCE.

It is striking to note that at the International Eugenic Conference, held in London, Dr. Pearson, the foremost exponent of eugenics, did not attend inasmuch as he regarded the subjects upon the program for discussion to be still sufficiently moot, to be kept in the laboratory for further investigation.

The disadvantage of premature discussion was shown. All the intrinsic questions relating to race betterment were treated and there was man-

*The Medical Record, June 17, 1911.

ifest in the varying opinions expressed at the conference a lack of sufficient data necessary to formulate a thorough and well defined eugenic platform. Mendelism does not enter into all phases of heredity. Its full scope and limitations are not known. Years of investigation will be required before the influence of the Mendelian principle can be demonstrated. The most vital debate of the conference related to the probable value of limiting marriage through State regulations as opposed to the single step of segregation of the unfit.

The total result in positive terms of the conference was the demonstration of the necessity of patience and calm judgment in investigating eugenic questions, before entering into legislation that might tend to retard the general progress of the movement. "Fools rush in where angels fear to tread," and the race must be protected from unscientific theories, crystallized in unfortunate and unwise laws.

The facts relating to heredity must be secured. The influence of disease and excess must be proven beyond cavil. The true eugenist pleads that remedial measures must be established upon a foundation that has no weak points. For upon the foundation depends the strength of the structure to be reared.—*Medical Review of Reviews.*



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HELIO THERAPY IN SURGICAL TUBERCULOSIS.

Gertrude Austin relates her visit to Doctor Rolliér's hospital at Leysin, Switzerland, where little tuberculous children are exposed for hours daily without clothing of any kind to the sun's rays in midwinter at an altitude of 5,000 feet. The body of the patient is exposed to the sun's rays in galleries opening into the wards and facing due south. The actual seat of the disease is uncovered for five minutes only, the first day, that the skin may not be burned or blistered; the next day the region is treated for two periods of five minutes each, separated by an interval of half an hour; and on the third day these exposures are extended to fifteen or twenty minutes. Each time a larger area of skin is exposed, so that by the end of a week or ten days the entire body, the head excepted, is lying nude in the sun; later the head, too, is uncovered. The large windows of the steam heated wards are never closed, even at night. A carefully studied diet aids the building



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up process. Of 369 cases of surgical tuberculosis treated by heliotherapy, 284 (78 per cent) ended in recovery; forty-eight in improvement; twenty-one remained stationary; sixteen (4 per cent) ended fatally. Rollier does not concentrate any one ray (Finsen), but uses diffuse white light just as it comes from the sun.—*Western Medical Review*.

MUCH NEEDED DRESS REFORM.

Reform in feminine dress must receive the attention of every thoughtful person. It is inconceivable that modest, pure minded women will be willing to adopt styles that admit of conclusions concerning their morals so contrary to their real intentions. It is well enough for the superior-minded purists to say that "to the pure all things are pure," and that the so-called evils of feminine dress are born in the minds of the lascivious and lustful. Some of this may be true, and woman-kind has little to fear from most men, no matter how they dress. But every medical man of large practice and experience knows only too well the fires of perversion kindled by the present dress of young, voluptuous females. Freud's studies showing the sexual origin or countless nervous and mental affections emphasize this and show that immodest dress is responsible for many a girl's downfall. Good women—and thank God, most women *are* good—will refuse to wear extreme and immodest apparel when they realize what construction is placed on their bravado or imprudence by mankind in general. Our only hope is that thinking men and women will awaken to the great importance of the subject and do their part in spreading the gospel of dressing modestly and decently. Let a certain class of femininity go to the extremes of immodesty and indecency, if they will, but not those who know the real significance of modesty and chastity.—*American Medicine*, July 12, 1912.

The ideas expressed herein meet with our emphatic approval and go hand in hand with the editorial comments on the "Curse of Fashion" in *The Medical Times* for May.

The *au fait* feminine dress of today has all the elements of vulgarity. The Parisian fashion setters would have us live in a petticoatless age, in which display of figure lines is the height of ambition. A well-known settlement worker on New York's great East Side, said, in a recent article,

that the horrors of present day dressing among women and the prevalence of the sensuous and obscene "bunny hug" and "turkey trot" in the dance hall are ruining thousands of young working girls, who ape their more fortunate sisters of Fifth Avenue and the upper West Side.—*The Medical Times*.

PREVENTIVE MEDICINE IN PRACTICE.

In the report of the Federal Health Service of the Philippine Islands for 1911, which has just been issued, is a statement fit to confound the benighted enemies of vaccination. Ten million persons have been vaccinated in the Philippines by officers of the Federal Government during the past five years! Not one death has been recorded as the result of vaccination! Smallpox, long a scourge in the Philippines, is now practically banished. What figures could be more eloquent?

As another witness to the progress of preventive medicine, the report of the Public Health and Marine Hospital Service, of July 12th last contained the statistics of *rabies* in the United States during 1911, which evidence a marked advance in the control of this disease. An investigation, made in 1908, provides a basis of comparison with last year. Despite the growth in population, and the undoubted increase in the proportion of cases which were reported to health authorities, the number of deaths from rabies has decreased from one hundred and eleven in 1908 to ninety-eight in 1911. The frequency of the occurrence of the disease as judged by the number of localities reporting cases in man or animals has greatly *increased*, from five hundred and thirty-four in 1908 to one thousand three hundred and eighty-one in 1911. This change, taken in conjunction with the diminished number of deaths, undoubtedly indicates that treatment for the disease has been more effective.

As the Report says, "Increased activities of health authorities and greatly extended facilities for the administration of protective treatment, have undoubtedly brought to light many cases of animal infection which would have escaped record in 1908. In contrast with the increased distribution in the lower animals, there has been a diminution in the number of human deaths, amounting to nearly 12 per cent. While this increase may possibly be attributed to chance, there is another element which must be given due con-

(Continued on page x.v.)

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CATALOGUES

The Medical Department of the University of Vermont will appreciate it very much if any of the Alumni can furnish catalogues of the Medical Department of the following dates to complete the files, 1857-66-7-8-9-71 and 73. These may be sent to the Dean.

All tumors of the testicle must be regarded as malignant. The history of previous venereal disease, the association of the swelling of the testicle with an injury, the length of the history dating perhaps from childhood, must not be allowed to outweigh clinical evidence. Always suspect a tumor of the testicle when there is an oval swelling which is not translucent and comparatively painless.—*The Medical Times*.

Uncontrollable vomiting can sometimes be checked with a hypodermatic injection of ten drops of one per cent. adrenalin solution.—*The Medical Times*.

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sideration—the much more widespread resort to antirabic inoculations of exposed persons.”

“In 1908 there were 23 institutions in the country where this treatment was administered; at present there are at least forty-two such institutions or their equivalent. In addition, there are five firms and public laboratories that furnish material for inoculations to practicing physicians, the business of these establishments having been established or their greatest activity having been developed within the last three years. The distribution of virus from the Hygienic Laboratory amounted to 443 treatments in 1908 and 942 in 1911. The number of persons known to have taken treatment in 1908 was about 1,500, while the table shows 4,625 for 1911. The decrease in the number of human deaths, coincident with an increase in the number of antirabic inoculations, at least effectually disposes of the claim still advanced occasionally by opponents of the Pasteur method that this treatment causes rather than prevents rabies.”—*Medical Review of Reviews*.

CHANCES FOR DOCTORS IN FOREIGN LANDS.

Secretary Robert E. Speer, of the Presbyterian Board of Foreign Missions; Dr. Edward H. Hume, secretary of the Yale Medical School in China, and Dr. Wilfred M. Post, of the American Hospital at Konia, Turkey, told of the opportunities for young American doctors to do good and win reputation in foreign lands at the Academy of Medicine at a recent meeting. Secretary Speer said: “In Persia there are only thirty doctors to 9,000,000 population. In Korea there are only thirty-six physicians to a population of 12,000,000. In Chile there is an average of only one physician to every 3,226 of the population. In Bolivia there is only one physician to every 10,000 of the population. The 5,000,000 South American Indians have not a single physician to care for them.

“Eighty per cent. of the children under two years of age in China die. People say that it is a good thing for the population of China to die in such great numbers because this prevents overcrowding. But the density of population in Germany is three times that of China and the natural resources of China, which ought to but have not been developed, are many times those of Germany.”

Doctor Hume began by telling that the Chinese had developed certain phases of medicine and surgical knowledge very early, one Chinese physician at least having removed tumors as early as 200 A. D. Jaundice in Persia, he said, was treated by native physicians by hanging a black chicken with yellow legs around the patient's neck.—*Western Medical Review*.

GIFTS TO COLUMBIA UNIVERSITY.

The trustees of Columbia University announce that under the will of the late Augustus W. Openhym an endowment has been established for research work into the cause, prevention, and cure of cancer. The amount of the gift was not made public, but it was said the sum was considerable. If at any time further research into cancer shall no longer be necessary, Mr. Openhym's will stipulates that the income may be used, as the trustees may determine, for research work in any branch of medicine or surgery. The endowment under Mr. Openhym's will is to be known as the Openhym Research Fund, and the terms of the gift are substantially the same as those of the Crocker Research Fund. The authorities of Columbia University plan to combine the two endowments. The Crocker Fund, which amounts to \$1,440,777, has been put under the direction of Dr. William Carter Wood, of the College of Physicians and Surgeons, in West Fifty-ninth Street. The receipt of \$4,300 from other sources to further medical and surgical research is also announced. Mr. Clarence H. Mackay gave \$2,500 for this purpose, the department of materia medica and therapeutics received \$1,800 from an anonymous source, and \$1,000 was given to the department of physiology by a person who wished his name withheld. Beside these gifts, the department of social science received \$1,000 from Mr. Jacob H. Schiff.

The rapid rise and maintained high pressure met with in uremia, Stokes-Adams syndrome, angina, migraine seizures, and other painful spasmodic affections are very probably due to vasomotor spasm, since both pain and symptoms ameliorate with the fall of pressure.—*The Medical Times*.



is a genito-urinary antiseptic and germicide, which, given internally, becomes active from the kidney glomeruli to the meatus urinarius, impregnates the urine with formaldehyde, neutralizes ammonia, prevents decomposition, clears urine of mucous, but does not irritate or poison.

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TABLE OF CONTENTS

ORIGINAL ARTICLES:—

- Blood Pressure, Its Control by Drugs,
By David Marvin, M. D. 27
- Diseases of the Cervix Uteri,
By Angell Randolph, M. D. 33
- Lane's Kink and Jackson's Membrane,
By C. E. Chandler, M. D. 35

- EDITORIAL 40
- NEWS ITEMS 50
- BOOK REVIEWS 52
- AN EPITOME OF CURRENT MEDICAL LITERATURE.... 52
- THERAPEUTIC NOTES xii

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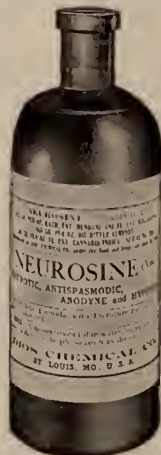
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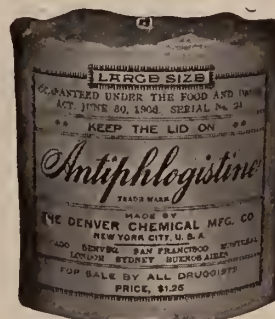
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Cancer of the colon causes symptoms very similar to those of ulcerative colitis, but in most cases the distinction is easy enough, as in the case of cancer the symptoms are chronic rather than acute; they date back for some months, and moreover the diarrhea though frequent is not so profuse as in ulcerative colitis. Under certain circumstances, however, the symptoms produced by a cancerous stricture in the bowel may closely simulate ulcerative colitis. Especially is this the case when there is a tight stricture and the bowel above it has become dilated and ulcerated. The symptoms are then due rather to the distension ulcers in the colon than to the growth itself. A large soft and rapidly breaking down growth may also closely simulate ulcerative colitis.—*The Medical Times*.

Hochwart states that of his tobacco-using patients about one-third have some nervous complaint, although some of them are of an extremely light and transitory nature; of his heavy smokers, more than one-half complain of unpleasant,

rather stubborn nervous symptoms. Especially is this true of the heavy cigarette smokers, the nature of their trouble apparently being more obstinate and longer lasting than that of the cigar smokers. Frequently these patients complain of palpitation of the heart, general nervousness, headache, vertigo, and not infrequently of insomnia, tremor, specks before their eyes, dyspepsia and gastrointestinal disturbances. Many of the patients report to him that owing to one or more of these various complaints they had been forced to give up the use of tobacco to a greater or less extent.—*The Medical Times*.

Even in the severest forms of neuralgia alcohol injections are of distinct value. A study of upward of six hundred cases seems to demonstrate a large percentage of cures and the relative harmlessness of the procedure. It is possible after repeated injections in the nerve to bring about a complete degeneration of its fibers. This method may also be used in intercostal and root neuralgia with distinct advantages, and also without danger.—*The Medical Times*.

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Vermont Medical Monthly.

VOL. XVIII.

FEBRUARY 15, 1913.

NUMBER 2.

BLOOD PRESSURE, ITS CONTROL BY DRUGS.*

BY

DAVID MARVIN, M. D.

Department of Pharmacology, University of Vermont.

From early times it had been a recognized fact that there existed within the arteries and veins of man a certain pressure. This pressure had been demonstrated when a large artery had been wounded, from the spurt of blood from its central end, but it was left to an English clergyman, Rev. Dr. Stephen Hale, to investigate it and place it upon a scientific basis, which he did in 1733.

He conceived the idea of measuring this static pressure by connecting the femoral artery of a horse to a long, vertical glass tube. As this was before the day of rubber tubing, he made the connection by using the windpipe of a fowl which proved to be entirely satisfactory. Great must have been his surprise on opening the connection to see a column of blood mount to a height of over eight feet. He did not stop with this experiment but in like manner made a connection with the vein which produced a column of blood one foot in height.

Thus did the Rev. Dr. Hale not only demonstrate blood pressure but also measured the arterial and venous pressure by the simplest method known.

CAUSE OF AND STRUCTURES INVOLVED IN PRODUCING IT.

Before considering the cause of and structures involved in producing blood pressure, it may be well to pause and, for a moment, consider the mechanics of circulation.

The heart, a powerful muscular force pump that drives the blood out into the aorta with rythmical strokes at the rate of 68 to 72 per minute, the aorta and larger branches in which elastic tissue predominates and therefore capable of great expansion, the medium sized arteries

in which there is a more even distribution of elastic and muscular tissue and therefore capable of moderate expansion and contraction, the arterioles in which muscular tissue predominates and therefore are capable of great contraction under proper stimuli.

(a). *Energy of the Heart.*—The heart, being the source of energy, imparted to the blood stream, is of prime importance when considering blood pressure. The ventricular systole under normal conditions is of uniform rate and the amount of blood thrown into the aorta at each contraction is also quite uniform. It produces a great distension of its wall with resulting lateral pressure which is at its height upon the closure of the semi-lunar valves and gradually lessens, reaching its minimum just preceding the opening of the same valves. This diastolic pressure is, according to Janeway, about 25 m. m. Hg. lower than the systolic pressure.

(b). *The Elasticity of the Arterial Walls.*—Were it not for the great elasticity of the larger arterial walls, the flow of blood would be intermittent, but instead we find that the energy imparted by the powerful systolic contraction is taken up by the elastic tissue of the larger arteries and upon the closure of the semi-lunar valves, is transmitted to the blood stream, thereby making the flow of blood and its pressure constant.

Knowing the thickness of the ventricular muscle and the force it exerts to produce this distension, is it not strange that rupture of the large arterial wall does not occur? Nature has wonderfully provided for this lateral pressure and, even though the structure seems thin and entirely inadequate to stand this pressure, yet from experiments conducted by Gréhant and Quinquard, it was determined that the lowest pressure necessary to rupture a carotid artery was eight times that exerted normally. We can infer from this, that a healthy artery will never rupture from increase in blood pressure.

(c). *Volume of Circulating Blood.*—The circulatory system, being a system of closed tubes whose normal calibre and capacity are quite fixed, it can be readily seen that if the amount of circulating fluid should at any time become

*Read at the Annual Meeting of the Vermont State Medical Society at Montpelier, Oct. 10 and 11, 1912.

greater than normal, then the lateral pressure must be necessarily increased and an increase in blood pressure will result. Conversely, a lessened amount than normal diminishes the lateral pressure and a fall in blood pressure would result.

(d). *The Peripheral Resistance.*—The blood, passing through its normal channel meets with resistance caused, *first* by friction against the sides of the wall; *second* by change in the direction of the current due to branching of the arteries; *third* and by far the most important, is the contraction of the wall, the so-called muscular tonus of the smaller arteries, which is a factor constantly present and must always be thought of clinically in determining the cause of a high or a low blood pressure.

Thus we find that blood pressure is due to two antagonizing forces, the heart pumping the blood forward and the smaller arteries and capillaries resisting the flow.

We will now consider very briefly the histologic structures which preside over these antagonizing forces that we may understand how they are influenced by drugs.

The energy of the heart is determined by the volume of blood pumped out in a given unit of time which is controlled by the rate of contractions and the force of each.

The rate of the heart is caused, *first* by its inherent muscular rhythm and *second*, by the nerves controlling it. The heart having two kinds, the cardio-inhibitory or vagus nerves and the cardio-accelerator or sympathetic nerves, each of which has its center in the medulla. The former, upon stimulation, slows the heart, the latter, upon stimulation, hastens the heart.

The resistance of the flow is determined by the size of the smaller arteries and capillaries which are under the control of the vaso motor system. They have two sets of nerves, the vaso dilators and the vaso contractors, each of which is supposed to have its center in the medulla. The former, upon stimulation, dilate the vessels, the latter, upon stimulation, contract the vessels.

The Blood Pressure in Different Parts of the Body.—The blood pressure is greatest in the aorta and its larger branches and diminishes gradually as the branches become smaller. It continues to drop in the capillaries and upon reaching the medium sized veins it falls to zero. In the larger veins before entering the heart the pressure may fall below zero.

It has been estimated that the normal aortic systolic pressure in man is probably about 150 m. m. Hg. Kress determined the pressure in the capillaries of the rabbit at 33 m. m. Hg., while Lombard determined it in man to be about 40 m. m. Hg. In the crural vein of the sheep it is 11.4 m. m. Hg. Bradford Dean and Knoll have estimated the blood pressure in the pulmonary artery of animals at about one-fifth the aortic pressure or 30 m. m. Hg.

HOW IT IS INFLUENCED BY THE NORMAL ACTS OF LIFE.

(a). *Respiration.* The act of respiration produces mechanically an increase in blood pressure. *First* by compressing the pulmonic vessels, forcing more blood into the heart. *Second*, it exerts an aspirating force upon the larger veins, acting very similar to a suction pump. *Third*, the distended lungs cause pressure upon the heart, the aorta and some of its branches, preventing the full expansion of these vessels and, *lastly*, it increases intra-abdominal pressure.

The act of expiration produces the opposite condition, namely: less blood going to the heart from the lungs, caused by the withdrawal of the intrathoracic pressure, the sudden withdrawal of the aspirating force upon the large veins, the lessened pressure upon the heart and adjacent vessels and a lowering of the intra-abdominal pressure.

That this variation is of clinical importance is seldom thought of by the physician. The blood pressure of an individual should be taken when the patient is breathing superficially for it is then that there is the least variation.

Muscular Work.—That muscular effort increases blood pressure is conceded by all. The increased heart rate with resulting increase in volume, is one factor in producing it.

The larger veins of the body possessing valves which open toward the heart and, upon closing, prevent the backward flow of the blood, are influenced by direct pressure and by the pump like action of the joints, as recently pointed out by Hooker; thereby forcing the blood on toward the heart at an increased rate and in greater volume, which tends to increase the venous pressure.

From observations made in our laboratory upon healthy students who had walked up three

flights of stairs, we observed an increase in arterial pressure of about 15 m. m. Hg.

Posture. Changes in the position of the body or its members causes pressure, especially upon the veins with resulting change in blood pressure. In the recumbent position there is an equalization of pressure in the extremities that does not occur while in the erect position and is, therefore, conducive to a low blood pressure. The standing or the sitting posture produces an average increase of about 5 to 10 m. m. Hg.

Gravity.—In the erect position of the body it is estimated that the difference in hydrostatic pressure within the vessels of the head and feet is equivalent to about 129 m. m. of Hg. but as it affects both arteries and veins alike, the result is a change of the distribution of the blood, the actual blood pressure being influenced only by the increased or decreased amount of blood to the structure as a result of gravity.

Sleep.—The body being in a recumbent posture during sleep, what has been said regarding this position applies here. This might explain the fall in pressure during sleep but it has been recognized that the greatest fall occurred during the first hours of normal sleep and then a gradual rise up to the awaking hour, which would indicate that posture was not the only factor present. This fall and subsequent rise can be explained upon the hypothesis, that during sleep the vaso motor center which is fatigued from the activities of the day, becomes rested, resuming its normal functional activity gradually.

Food.—During the ingestion and digestion of food, a larger volume of blood is present in the digestive organs which increases the pressure within them with a resulting loss in the pressure in the more remote parts of the body. The pressure of food in the gastro-intestinal tract increases intra-abdominal pressure. Absorption of liquids and products of digestion increases the size of the liver and volume of circulating blood, all of which would tend to increase the pressure of the periphery. One condition tends to equalize the other so that it is a question whether the presence of food in the stomach should be considered as a factor in determining the normal blood pressure of an individual.

HOW INFLUENCED BY THE SENSES.

External Senses.—The external or special senses are constantly furnishing the higher centers with stimuli which are interpreted with

resulting influences upon the centers of the medulla, especially the vagus and vaso motor centers with resulting changes in the heart rate and calibre of the smaller vessels. The smaller vessels which are influenced greatest are those of the abdominal organs innervated by the splanchnic nerves, the so-called "splanchnic area." I would at this time emphasize the fact that in nearly all cases of abnormal blood pressure which you will meet, this is the greatest factor to be considered, and oftentimes the only one.

Excitement.—The excitement incident to a heated argument produces a flushed face, due to vaso dilatation. The heart rate is increased due to stimulation through the accelerator nerves. A vaso contraction of the splanchnic area, with a resulting high pressure which, according to Goldwater, amounts to 40 m. m. Hg. Judging from this, the clinician should constantly guard his patients who have a hypertension, from all possible chances for excitement.

Fright.—Sudden fright affects these centers so profoundly that the patient becomes ghastly pale, reels and falls upon the floor in a dead faint. The patient has literally bled into his great splanchnic area, not leaving enough blood in the brain to carry on the conscious state. The stimulus produced by the body striking the floor, assisted by gravity, carries blood to the brain, reviving the centers to functional activity. The vessels of the splanchnic area partially contract and consciousness is restored.

External Temperature.—The application of heat or cold, either atmospheric or from baths, exert a marked influence upon the distribution of the blood supply, providing the application is extensive.

From experiments conducted by Müller it was determined that both heat and cold applied in the form of a bath to a healthy individual, produced an increase in pressure of about 15 m. m. Hg. which was followed in a half hour by a return to normal and if the bath was longer continued, a fall below normal was produced. This would indicate that the safe limit for the bath, either in a tub or a pool of water would be thirty minutes.

Internal Senses.—That the internal senses such as pain, muscle, hunger, thirst and fatigue do influence the centers and indirectly the structure they preside over, can not be doubted.

So far as I am able to ascertain, very little has been done experimentally along this line and should conclusions be drawn at this time, they must necessarily be entirely theoretical and not founded upon experimental evidence.

The suffering of agonizing pain, the craving for food and the great distress from excessive fatigue, produce the pale face, the shrunken skin and, in many cases, the unconscious state. These all point to a great dilatation of the great splanchnic area with a marked fall in blood pressure.

HOW INFLUENCED BY DISEASE.

1. Diseases Producing a Hypertension.—Time will not permit a lengthy discussion of blood pressure in disease but a statement of some of the important diseases that influence arterial tension may be helpful.

It is claimed by various authors and clinicians that the following list of diseases have, as a rule a high arterial tension: cerebral compression, thrombosis, embolism, meningitis, and cerebral anemia, insomnia and, in general, the nervous diseases, asthma, diphtheria, pleural effusions, aortic insufficiency, angina pectoris, arteriosclerosis, biliary colic, peritonitis, abdominal effusions, nephritis, uremia and eclampsia.

2. Diseases Producing a Hypotension.—The following diseases and conditions are usually accompanied with a low arterial tension: general paresis, tuberculosis, the anemias, carcinoma, severe infections, typhoid fever, acute endocarditis, syphilis, collapse in acute infections, shock during surgical operations, severe hemorrhage and always preceding death.

How Influenced by Drugs.—When considering the causes of blood pressure, it was stated that there were four important factors to be considered namely: the energy of the heart, the elasticity of the arterial wall, the volume of circulating blood and the peripheral resistance. These being the factors which cause and maintain the normal blood pressure, it can be inferred that, should the blood pressure in an individual become abnormal, from whatever cause, it must be due to some change, either functional or pathologic, in some one of these structures or in the delicate structures that preside over their functional activity. Granting this to be true, we will next consider a few of the most important drugs that have proven from experimental evi-

dence, to effect the centers or structures presiding over these factors and, therefore, influence arterial tension.

It is doubtful whether drugs have any marked influence over the elasticity of the larger arteries or the volume of blood in circulation; therefore we can dismiss these forces from our mind as being factors beyond our control. There yet remains the energy of the heart and the peripheral resistance for us to consider. When considering the histologic structures presiding over the heart, two sets of nerves, the cardio-inhibitory or vagus nerves and the cardio-accelerator or sympathetic nerves were mentioned. It is doubtful whether drugs influence to any appreciable degree the cardio-accelerator nerves, either at their center, their ganglia or their final terminations upon the heart muscle. Therefore it can be stated that if a drug is to influence blood pressure, it must do it by one or more of the following methods. *First*, direct action upon the heart muscle; *second*, direct or reflex action upon the vagus centers, their ganglia or their terminations; *third*, direct or reflex action upon the vaso-motor centers, their ganglia or their terminations.

In what I have to say regarding the effect of drugs upon arterial tension, I will endeavor to explain upon what structures they act either directly or reflexly to produce the results obtained.

DRUGS THAT INCREASE BLOOD PRESSURE.

Adrenalin.—We have no drug at our command which, when properly used, produces such striking results in so short a time as Adrenalin.

The proper method of administration, when desired to increase arterial tension, is the intravenous method. I cannot criticise too severely the idea of its administration by the mouth, by the subcutaneous or by the intra-muscular methods. It has absolutely no effect when given by stomach or subcutaneously and so slight an effect when given intro-muscularly that it need not be mentioned.

It acts directly upon the heart muscle and also produces a stimulation of the vaso constrictor endings in the arterioles, more especially those of splanchnic area.

Digitalis.—One year ago I could not have entertained the views I now hold regarding this drug. The reason being that the most eminent pharmacologists of Europe and America claim

that in man this drug does not increase blood pressure. Clinicians have long thought that it did, but have failed to produce any experimental evidence to verify their statements. In view of these conflicting ideas, I endeavored to clear up the subject and produce, if possible, some experimental evidence. From experiments conducted upon man I determined the following facts. *First*, that digitalis does not produce an increase in blood pressure within two hours after its administration. *Second*, that it does increase blood pressure at a later time, the maximum being reached about five hours after administration. *Third*, that from a single dose of twenty minims it persists to act for a period of fifty hours. Digitalis increases the blood pressure by direct action upon the heart muscle and also by a mild stimulation of the vaso-constrictor center.

Strychnine.—What I have said regarding the conflicting opinions held in regard to digitalis also applies to strychnine. Less than a year ago the editor of the *Journal of the American Medical Association* asked through the editorial column for volunteers to experimentally clear up this subject. We have endeavored to obtain some light upon this subject and have found that it does increase blood pressure in man. Its action is probably due to direct stimulation of the vaso-motor center in the medulla.

Nicotine.—I am well aware of the fact that nicotine is not a drug prescribed by the physician nor would it be a safe agent to use in its liquid form nor could it be used in all cases. But I am aware that next to Adrenalin we have no agent that will so quickly increase blood pressure, that will raise it to so high a degree when administered in the form of tobacco, by the usual method of smoking.

That this agent can be utilized frequently by the surgeon and occasionally by the physician with beneficial results in cases of shock following operations, hemorrhage and other conditions with grave depression of the vaso motor system, cannot be denied.

Its action is produced in a few moments and is due to the stimulation of the vaso constrictor ganglionic cells which supply the arterioles.

DRUGS THAT DECREASE BLOOD PRESSURE.

Amyl Nitrite.—The rapidity of action with which some of the vaso constrictors produced their effect is equalled by the vaso dilators. Thus

we find amyl nitrite producing a marked fall in blood pressure, commencing immediately after the inhalation, reaching its height within five minutes and passing off equally as rapid. Its continuous use, either by inhalation or by other methods, should never be practiced for it causes the formation in the blood of methaemoglobin. The fall in blood pressure is thought to be due to direct action upon the unstriated muscular fibers of the arteries and veins.

Nitroglycerin.—That we have an agent in the form of nitroglycerin that is capable of immediate and continuous action over a period of from two to three hours, makes it of far greater importance clinically than amyl nitrite. From experiments conducted upon men, we found that its action, when administered under the tongue, was obtained fully as early and was prolonged for a greater length of time. I can see no reason why its use should not meet with as good results as amyl nitrite in cases of angina pectoris.

The seat of its action is probably the same as that of the other nitrites.

We have other agents closely related to amyl nitrite and nitroglycerin, namely the nitrites of sodium and potassium which have a like action; also erythrol tetranitrate, which is a dangerous explosive. Its absorption takes place slowly and, therefore, acts for a longer period of time.

Aconite.—A drug in common use and known for a long time to reduce arterial tension. The United States Pharmacopoea gives the average dose of the official tincture as ten minims. From our observations, the maximum dose is altogether too large. Two students accidentally took one c. c. or about fifteen minims which resulted in a drop of blood pressure of over fifty-five m. m. of Hg. The blood pressure of one student registered only 50 m. m. of Hg., the lowest record I have ever seen.

Its action is dependent upon stimulation of the vagus center, together with some action upon the vaso motor center.

Atropine.—I feel that I am walking over ground that has never been trod, when I class atropine as an agent that diminishes blood pressure in man. I think I can justly do so in view of the fact that experiments heretofore have been conducted upon animals and, so far as I know, no experimental observations have been made on man. That results obtained upon animals

cannot always be applied as being true in man is a recognized fact. The result of our experiment conducted upon man has shown a fall in blood pressure in every case. The fall was immediate and proved true with varying doses. That this fall may not occur in all cases or in diseases is admitted, but it is doubtful in my mind whether atropine produces an increased tension in disease.

I make this statement regarding our experiments with this drug as a preliminary report, hoping in the near future to conduct further investigations which I shall be pleased to report to you at some future time.

I am greatly indebted to my assistant, Dr. Bush, for observations made in the laboratory and for the transfer of records to graphic charts.

Summary.—Blood pressure is produced by the energy of the heart, the elasticity of the arterial wall, the volume of circulating blood and the peripheral resistance.

The energy of the heart and the peripheral resistance are under the control of structures whose centers are in the medulla.

The blood pressure gradually lessens from 150 m. m. Hg. in the aorta to 40 in the capillaries to 11 in the smaller veins and to 0 in the larger veins.

The normal acts of life such as respiration, muscular work, posture, gravity, sleep and food, modify arterial tension.

The external stimuli which produce excitement, fright, temperature; together with the internal sensation of pain, hunger, and fatigue react to change the arterial tension.

Many diseases alter the normal blood pressure, some by increasing, others by diminishing it.

Drugs alter the blood pressure by direct action upon the heart, or by direct or reflex action upon the nerves controlling it. By direct action upon the unstriated muscular fibers of the arterioles or by direct or reflex action upon the nerves supplying them.

The adrenalin, digitalis, strychnine, and nicotine increase arterial tension; while amyl nitrite, nitroglycerin, aconite and atropine diminish arterial tension.

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DISCUSSION.

Dr. E. H. Martin:—We have had something unusual and remarkably fine in this paper, and both the State and this Society are to be congratulated upon having a man who has the opportunity and ability to perform these experiments and get up such a paper. So far as the scientific aspects of this paper are concerned it is impossible for me to discuss it. Perhaps I might suggest one or two practical deductions, and one is the value of blood pressure in the matter of prognosis. This is brought out by the life insurance companies who are requiring an examination of the blood pressure in all cases of physical examination. It is also of considerable value of prognosis in certain operations.

I remember sending a case of neglected stricture to the Fanny Allen Hospital, which the doctor declined to operate on at once on account of the high blood pressure, I think it was about 225. This man died without an operation and would have died with the operation. There is one important deduction to be drawn from the paper, and that is that one must be careful as to the time when we take the blood pressure. You can see that, if a man comes to you after a hearty meal and has smoked several cigars and drank some whiskey, your blood pressure will be abnormally high, and if you take the observation when he has been fasting you will have a very different result. The conditions under which blood pressure is taken should be the same and where nothing has been brought to bear upon the person to deviate him from the normal.

The two drugs that I have used in my experience have been the nitroglycerine for its temporary effect and iodide of potassium for its continued effect, and the results have been fairly good, but conditions which lead up to arterio-sclerosis are hereditary and you should treat the man's grandfather instead of him.

Dr. L. B. Morrison:—The diagnosis and treatment of diseases in which we get a high or low blood pressure is more easily kept in mind if we remember in a general way that the high blood pressure is found in diseases causing spastic conditions of the body complex, while the low pressure is found in the opposite type, i. e., fevers, etc., and in the treatment of the high blood pressure, as Dr. Beecher suggests, we simply aid nature by putting the patient to rest

in bed and relieve by natural means the spastic conditions.

One thing in relation to the drugs that increase the blood pressure. Until the last two years, nearly all the students along this line have been combatting strychnine as a factor of increasing blood pressure, and I am very glad to know that Dr. Marvin finds it does increase blood pressure. I have felt that strychnine does increase blood pressure in the abnormal state and with me it has been a favorite drug in the treatment of beginning shock.

Dr. L. H. Ross:—I wonder if Dr. Marvin mentioned that asthma was one of the diseases which cause increased blood pressure? Is the increase just during the spasm or after the spasm has left, and will repeated attacks of asthma cause increased blood pressure?

Dr. Wasson:—In view of the statement that conditions of excitement are attended with increased blood pressure, perhaps it would be interesting to note that in insanity there is a fall in the blood pressure.

Dr. C. H. Beecher:—We get our greatest clinical benefit in the treatment of high tension from remedial measures other than drugs. It has been definitely proven, as you might observe in a case, if you are able to find one, where the vessels of one arm are sclerosed and the other not, that the pressure in the sclerosed arm will be no more than 5 to 10 millimeters higher than in the unsclerosed arm.

Dr. David Marvin:—The first speaker spoke of iodide of potassium as an agent used by him to lower blood pressure in arteriosclerosis. My opinion regarding its use is that it does not lower the pressure but does delay the process taking place in the arterial wall.

In answer to Dr. Wasson's question, I will say that I mentioned excitement in the normal individual and not in the insane, as producing a hypertension. In the insane, fear is often associated with the apparent excitement and a hypertension might be expected.

Regarding the administration of adrenalin by different methods I will state that the opinion now held by pharmacologists is based upon animal experimentation and not upon man. I have found, as has Dr. Hatcher of Cornell, that when given by stomach or by the subcutaneous route there is practically no effect and only a slight increase when given intramuscularly. We may determine in the future that these findings will not apply to man.

Does ether affect the results from adrenalin? Ether being a drug that produces a slight increase in blood pressure and a fall only in the fourth stage of its administration, I should say that it would assist adrenalin in producing its effect.

Regarding the acquiring of tolerance from the long use of the nitrites, it has been stated by some authors that tolerance is not established but if we go back to the cell remembering that it is upon this structure that a drug acts and that this cell is constantly receiving the same drug which acts as a stimulus, I can see no reason why there would not be some tolerance acquired.

The actual blood pressure in arteriosclerosis as maintained by Dr. Jenne is not the reading as indicated by the column of mercury but is the reading minus the resistance offered by the hardened artery.

The title of this paper is not the *general discussion of blood pressure but its control by drugs*. Some one has spoken of other measures being used. We

should confine ourselves to the subject under consideration.

How does asthma produce an increase in blood pressure? During the attack of asthma there is present in the circulation an increased amount of CO₂ which is the normal stimulus to the center of respiration. This accounts for the great inspiratory effort, bringing into use all the muscles of respiration. This increased muscular effort, plus the possibility of CO₂ also stimulating the vaso-motor center explains the hypertension present.

DISEASES OF THE CERVIX UTERI.*

BY

DR. ANGELL RANDOLPH.

Mr. President, and Members of The Washington Co. Medical Society:—In presenting this paper on diseases of the cervix uteri, I am making no attempt to present new ideas, but only some practical phases of the subject, of common knowledge to you all, in such a manner as to refresh our memories, provoke discussion, and increase our ability in diagnosis and treatment. That condition of the cervical canal known as atresia, has often been accused of producing dysmenorrhea and sterility. That it does obstruct the menstrual flow, especially if associated with flexion of the uterus, and produce painful menses, I think we will all agree. How often do we see a patient who suffers severely for the first day or two of her periods, or until the flow is freely established, examination of whom reveals a constricted cervical canal.

As to sterility, if we accept the theory that conception most often occurs in the Fallopian tube, we can hardly believe that the lumen of the cervical canal, even in these constricted cases, can be smaller than that of the Fallopian tube, and thus prevent the entrance of the spermatozoa. However, as a result of this obstruction there may be established an endometritis, which lends its influence in producing sterility.

Dilatation affords relief, which to be permanent must often be repeated a few days prior to the periods, a treatment to which most patients will not be subjected. Pozzi, of Paris, has devised an operation for the cure of this condition, which I believe is better than any other that I have seen performed. The operation con-

*Read before Washington County Medical Society.

sists of dilating, incising the cervix bilaterally, and suturing the internal cervical mucous membrane to the external cervical mucous membrane, after first cutting out small strips between them so that they will come together. He says concerning the results of this operation, "that success is universal as regards dysmenorrhea which is immediately and definitely cured." "As regards sterility more than 25% of the cases became pregnant."

Elongations of the cervix exist in some instances to a degree that is troublesome both to the patient and physician. I have a very vivid recollection of a certain patient whom I attended in confinement a few years ago, whose cervix was, as I remember it from two to three inches in length; living some distance from my office I "enjoyed" an enforced vacation, that had more of sameness than pleasure or profit.

Not only does this condition cause protracted labors, but often from its increased length, the top of the cervix becomes eroded from pressure against the posterior vaginal wall. This condition demands amputation for a cure. Erosions of the cervix are also produced in a similar manner during pregnancy, from the increased weight of the uterus, sinking into the pelvis. These, I believe, are often the source of reflex nervous irritation, and one of the causes of vomiting of pregnancy.

By treating these with tr. iodine, and supporting the uterus with vaginal tampons, or a properly fitting pessary, till by its growth the uterus is supported above the pelvic brim, I have seen some severe cases of vomiting of pregnancy relieved as by magic.

Erosions of the cervix also occur following labor, and are one of the factors that produce puerperal infection. A report of a case may perhaps illustrate this better than I can in any other manner.

Oct. 21st, 1911, Mrs. S., a primipara, had a somewhat tedious labor, terminated by a forceps delivery. There was more difficulty in delivering the body of the child, than in any other case that I have ever attended.

There was a slight laceration of the cervix. The condition of the patient was normal until Oct. 30, when there occurred a chill, followed by a temperature of 103, rapid pulse and marked evidences of puerperal infection. The lochia was normal, and there was no abdominal tenderness. Using a bivalve speculum the cervix

was carefully examined, and a necrotic spot found at the site of the cervical tear.

This was treated with carbolic acid, followed by alcohol, the same treatment repeated the following day and again in two days, after which recovery was uneventful. Various inflammatory conditions of the cervix, give rise to cysts and cystic degeneration, whose treatment varies from mere puncture to complete amputation of the cervix.

Cervical polypi spring from the mucous membrane of the cervix, and often protrude into the vagina. They often produce hemorrhage, and a putrid discharge. The only rational treatment is their removal, both to control the hemorrhage, prevent the foul discharge, and eliminate the well recognized tendency toward malignancy.

Submucous fibroids are sometimes delivered into the vagina. I have the record of a case treated several days ago, who presented the history of flowing for several months, the presence of a foul putrid discharge, one or two degrees of temperature continuously, and a marked general cachexia. There was a large mass, about the size of the fist in the vagina, whose constricted pedicle had produced sloughing, which accounted for the above described symptoms. There was also a large fibroid uterus. The submucous fibroid was removed, the uterus curetted, and after three months improvement a supra vaginal hysterectomy performed, followed by continued good health. Lacerations of the uterine cervix, in some degree, occur during nearly every case of labor. Hemorrhage may result from such lacerations, and those cases of post partum hemorrhage, where the uterus is well contracted are usually due to an open bleeder in the torn cervix. I have seen a few of these. They are controlled by suturing the laceration, enclosing the bleeder, or by snugly tamponing the uterus and vagina.

Small lacerations, with the present day methods for caring for puerperal cases, usually heal and require no further attention.

Deep lacerations should be repaired, otherwise there may result erosions, eversion of the cervical mucous membrane, cystic degeneration, the formation of cicatricial tissue, with its accompanying reflex nervous phenomena, or the development of malignancies.

Although the question of irritation as a causative factor in producing cancer is not definitely

settled, I believe that on the lip of the smoker, the ulcer of the stomach, and the laceration of the cervix, these irritations all exert their influence in the production of malignant conditions, in their respective regions. Cancer of the cervix is rare in nulliparous women. Good authorities claim that cancer of the uterus is more frequent than in any other part of the body, also that 90% of these begin in the cervix, and that in 20% of those suffering with uterine cancer, other members of the family have had cancer in some form. The important subjective symptoms are, an increased leucorrhea, hemorrhage at irregular intervals, and a foul putrid discharge. Digital examination easily provokes bleeding, especially if it be an epithelioma, not always so if it be an adenocarcinoma, which may be well developed in the cervical canal, before presenting visible evidence at the external os. Of these cases Prior concisely states that "the ingrowth preceeds the outgrowth." Examination with the speculum shows a nodular, granular surface, exceedingly friable, bleeding at the slightest touch. Cystic nodules may be readily recognized by the glairy discharge following puncture. If necrosis is present there will be an ulcerated surface covered with pus and blood, and later an excavated cervix.

The importance of early diagnosis cannot be too strongly emphasized, for upon it depends the early surgical treatment, viz., a complete hysterectomy, which offers the only hope of cure. The records of some of our larger clinics show that only 15% of the cases of cervical cancer coming to them permit of radical cure, 85% having passed the border line, becoming incurable through the failure of an early diagnosis. The use of the cautery in these incurable cases often serves as a palliative treatment and prolongs the life of the patient considerably.

The question of taking specimens of tissue for microscopical examination is an all important one. Many advise it, and yet there is an element of danger associated with the practice. The records of *Ochner's Clinic* show many cases where this has been done, that resulted in such rapid stimulation of the growth, that a permanent cure became impossible, and his conclusion is that where the tissues appear suspicious a hysterectomy should be immediately performed. The following case which I saw and assisted in the care of with one of my colleagues carries an emphatic meaning.

April, 1911, Mrs. S., age 26, nulliparous, mother died with uterine cancer. Had been treated for about a year for cervical disease, three months previous had been in a hospital, and had a curettage. At this time there was discovered what appeared to be a small laceration of the cervix, which was sutured. The disease progressed rapidly, and examination revealed an ulcerated, deeply excavated cervix, extending rather high into the pelvis on the right side. She was otherwise in perfect health. The outlook was foreboding. The seriousness of the condition was explained to the patient and her husband, upon whose earnest solicitation, the uterus still being movable, a hysterectomy was performed with the vain hope of a cure. The disease had extended high into the pelvis, so much tissue being involved that it could not be completely removed, and this woman with her life paid the penalty of a late diagnosis.

LANE'S KINK AND JACKSON'S MEMBRANE.*

BY

DR. C. E. CHANDLER,
Montpelier.

The Lane kink or the ileal kink and Jackson's membrane or membranous pericolicitis involving the right iliac region are two pathological conditions, frequently present, in patients suffering from chronic appendicitis.

A great deal of interest is attached to the study of just how much effect these formations have on the intestinal tract in interfering with normal peristalsis and it is now believed that surgical measures are necessary to relieve the intestine from these restraining and obstructing bands.

It is very well known that some of the patients with the symptoms of chronic appendicitis have not been relieved by appendectomy but have returned in a few weeks or months, complaining of the same set of symptoms that existed before operation. At a subsequent laparotomy these ileocecal adhesions were removed and a permanent recovery resulted.

*Read before the Washington County Medical Society, Sept., 1912.

Although these adhesions were so often seen during laparotomy operations their importance was not forcibly brought to the attention of the profession until 1908, by Dr. W. A. Lane of London in a paper on "chronic constipation." About six months later Dr. J. N. Jackson published a description of the various forms of adhesions found in the ileocecal region and stated that he believed the pathological side had not been fully recognized as an entity and had not received proper surgical consideration. Since these papers were published a great deal of study has been given to this subject by the Mayos, Gerster, Martin, Pilcher and others.

PATHOLOGY.

Lane's kink and Jackson's membrane, singly or together, may either accompany chronic appendicitis or be present without any involvement of the appendix. The appendix, however, in a large proportion of the cases is involved and a great many times it seems to be the starting point.

W. A. Lane first described the kink as follows:

There develops on the under surface of the mesentery of the last few inches of the small intestines a new band, which at first forms part of the under surface of the mesentery. Later it forms a ligament distinct from the mesentery. This ligament contracts and deforms the ileum, producing a kink or obstruction of this portion of the intestines, especially in the erect posture of the trunk. In consequence of this kink the small intestine becomes very much dilated and this dilatation may extend up as far as the pylorus. The symptoms produced by this obstruction are superficially very much like those of appendicitis and in consequence a large number of normal appendices have been removed to bring about the cure of symptoms resulting from this obstruction, needless to say, without any particular benefit or advantage to the patient.

Dr. F. H. Martin of Chicago publishes the following description of the ileal kink:

The discoverer of this condition attributes the cause to a pull upon the end of the ileum by a prolapsed cecum, the exact cause of the kink or bend being a counter pull on the ileum by its mesentery about three inches from its attachment to the cecum.

From a somewhat careful observation of a limited number of cases, I have concluded that the kinking of the ileum within four inches of its cecum attachment instead of elsewhere, is due to the fact that the ileum at its termination in the large bowel possesses an extremely short mesentery, viz., from one to two inches. Given this comparatively fixed portion of the compressible tube, there are two factors which lead to its distortion (a) a too movable or displaced large bowel, and (b) an abnormal disposition of the remaining portion of the small bowel or other viscera.

It is safe to assume, I think, that a pathological kink of the ileum is not liable to occur at this location if the large bowel to which it is attached and the balance of the ileum and other viscera are normal in their normal positions.

The different conditions I have observed accompanying pathological kinks of the last six inches of the ileum are as follows:

(a). An extreme prolapse of the cecum and ascending colon resulting in an inverted V shaped kink, the apex of the bend being four inches from the ileum's attachment to the cecum with the right arm of the V adherent to the colon, the two arms of the V being closely approximated and adherent, with their two portions of mesentery adhered together, resulting in a marked narrowing in the lumen of the bowel.

(b). Extreme prolapse of the stomach, with transverse colon prolapsed, beneath the stomach, the small intestines filling the pelvis and lower abdomen underneath the stomach and colon, resulting in a definite right angle kink of the ileum near its attachment to the cecum and a V shaped bend with its apex attached to the broad ligament with the two arms three inches in length approximated, and their mesenteries thickened and adherent to each other and the walls of the intestines.

(c). In which both cecum and small intestines are prolapsed, and where a tendency to general visceral prolapse is present, resulting in a variety of kinks in the last six inches of the ileum due to pull upon its short mesentery, the shape and direction of the bend depending upon the particular influence exerted upon it by the abnormal position of the viscera surrounding it. A most common form of kink that I have observed in these cases is a horseshoe bend with a three inch

curve, the concavity of the curve looking toward the diaphragm, and the bowel at the center of the curve attached to and rolled in the left leaf of its mesentery, materially obstructing its caliber.

The kinks or bends in my opinion are due, therefore, to a decided displaceability not only of the cecum but of all the viscera surrounding the last three inches of the ileum, traumatizing it by undue pulling on its distal end in the case of the cecum, on its proximal end in the case of the balance of the ileum, or by pressing upon it and its attached mesentery, and grinding their opposing surfaces together in case of marked displacement of the superimposed viscera, such as the right kidney, the liver, or stomach.

C. H. Mayo in December, 1910, at a meeting of the Western Surgical Association, stated that he believed in certain cases of the Lane kink the ileum was rolled over and fixed upon the mesentery, evidently a condition of inflammatory character. He also observed that when adhesions were present and the peritoneal bands were greatly thickened, the appendix also showed chronic inflammation which was apparently the source of the peritoneal thickening. Sometimes these adhesions, with resulting bands of peritoneum causing a kink, appear to be of congenital origin because the condition has been reported in children without evidence of inflammatory cause.

Jackson's membrane, more properly called membranous pericolitis affecting the right iliac region was first described by him in these words:

"From a point just at the hepatic flexure to three inches above the caput there spreads from the parietal margin over the external lateral margin to the internal longitudinal muscle band a thin vascular veil in which long straight, unbranching blood-vessels course, most of which are parallel with each other and take a slightly spiral direction over the colon from the outer upper peritoneal attachment to the inner lower portion of the gut ending just above the caput. The appendix is not implicated in any way.

"Coursing with the blood-vessels are numbers of shining narrow bands of connective tissue which gradually broaden as they go and end in a slight fan-shaped attachment at various points on the anterior and inner surfaces of the colon. At these points of attachment, the gut is held in rigid plication.

"The entire specimen conveys to the eye the idea that an edematous fluid lies beneath this

delicate membrane, and reminds one of nothing so much as an edematous arachnoid so often encountered on removing the dura mater from the brain of a dead alcoholic. The colon seems placed in a diaphanous bag slightly too short to contain it without wrinkling. At the beginning of the hepatic flexure the drawn membrane particularly angulates the contained colon. Here and there are spots and tags of fat beneath the cobweb. On handling the specimen the colon slips about in its bag with entire freedom as a fetus within its amniotic sac. A portion of the parietal peritoneum has been removed with the colon and shows that the membrane and blood-vessels arise in and are continuous with the structures of the parietal peritoneum, as it sweeps over the colon the entire structure seems to be peritoneum, loosened from its close connection to the abdominal wall and colonic surface by some serous exudate after which the particular vascularization and connective tissue banding has occurred as a chronic reaction to irritative influence."

Hofmeister describes these adhesions as varying in consistency from that of a fine veil-like substance to firm strands of scar tissue. The constricting action of such bands can not be fully appreciated until one sees how the intestinal wall unfolds to its normal shape after their division. Gerster attributes these adhesions to bacterial infection of the peritoneum either by direct surface contact or from within the visceral lumina by exosmosis through these walls leading to denudation of its endothelial covering which may result in adhesion of adjacent surfaces. The solidity and density of the adhesions seem to depend as much upon the duration as upon the intensity of the infection process. Chronic ulceration such as that caused by a foreign body in the appendix may produce the densest and most massive deposit of newly formed connective tissue. Naturally the deposit is more dense in the immediate vicinity of the inflammatory focus, diminishing in proportion to distance. In his experience in some cases extensive dense adhesions, which had been demonstrated at a previous operation, were found entirely absent at a subsequent operation or autopsy. The mode of absorption and disappearance of adhesions is, strictly speaking, a physiological process which may occur in all saccular cavities lined with endothelium, such as joints, sheaths of tendons and pleura. Pilcher consid-

ers these films and bands the result of long continued or oft-repeated mild infections of the peritoneal covering of the cecum and appendix transmitted through the intestinal wall, and says that no one who has operated many times for the removal of the appendix can have failed to note the frequent co-existence of a more or less extensive and intense congestion of the cecal peritoneum, a true typhilitis.

FREQUENCY.

It is very difficult to state accurately the frequency of these conditions as the subject is comparatively new. In a little over one year Connell met with iliocecal adhesions fifteen times. Nine of these cases were Jackson's membrane and six Lane's kink. Jackson saw nine cases of membranous pericolicitis in one year. Mayo states that the two conditions are frequently combined. Wilms has found a movable cecum producing symptoms in one out of every four cases of chronic appendicitis and this condition is believed by most surgeons to be one of the factors in the cause of iliocecal adhesions. In fifteen patients with the symptoms of chronic appendicitis operated upon during the first three months of this year I found iliocecal adhesions present in seven cases. Five were of the variety called Jackson's membrane and two were of the form known as Lane's kink. It is my belief that nearly one-half the cases of chronic appendicitis are complicated with iliocecal adhesions.

SYMPTOMS.

The clinical symptoms of the ileal kink as described by Lane, Jackson's membrane as described by Martin, ptosis of the cecum is described by Wilms and the symptoms that we have been accustomed to call chronic appendicitis are practically the same.

Connell's description of the symptoms is very brief and complete.

They are those common to general enteroptosis, such as malaise, headache, backache, anorexia, nausea, eructation of gas, sometimes vomiting, pain or a sense of fulness after eating, loss of weight and of muscular tone. Constipation may be very obstinate and may be the first symptom mentioned and there may be brief periods of diarrhea. There is frequently a sensation described as "coals of fire" and the right

iliac region may become exquisitely tender, and so hypersensitive that the weight of even bed clothes becomes intolerable, which of course suggests the diagnosis of hysteria. The pain varies greatly, from merely a sense of discomfort to that which may demand morphine. The severe colics come on at irregular intervals and the pain and tenderness is usually located in the right iliac fossa and in the region of the umbilicus. There may be a swelling due to gas in cecum. There is no increase in the temperature, and the attack is terminated or greatly relieved by recumbency, diet, enemata, and lavage, one or all, hence the temporary relief following appendectomy. These attacks are repeated until there is a constant pain in the right side of the abdomen which makes a chronic invalid of the patient.

Later there develops an autointoxication, with greatly impaired nutrition, with the foul breath, the clammy extremities, the muddy, hairy skin, the cystic changes in the breast, and the neurasthenia, all so masterly described by Lane under the caption "chronic intestinal stasis," which is frequently a preliminary stage in anemias, tuberculosis, and cancer.

Dr. Pilcher believes that the symptoms produced by the iliocecal adhesions depend on the degree of interference with the function and circulation of the cecum and ileum. The fecal stasis may be due to three causes: (1) defective peristalsis, (2) real obstruction, and (3) enterospasm. Autointoxication with its various symptoms results from one or more of these conditions. Chronic pericolicitis appears as the first condition, next constricting bands and restraining films, then fecal stasis develops with neurasthenia in some of its many forms.

Renal irritation and nephritis may be one of the complications of iliocecal adhesions. Several cases are reported where these disturbances of the kidney undoubtedly were the sequel of pericolicitis by the migration of the infective organism from the intestines to the lymphatic vessels of the right kidney. Very slight lesions such as mild pericolicitis allow the micro-organisms to pass to the chain of the lymphatics.

DIAGNOSIS.

In the cases where the symptoms have continued after the removal of a slightly diseased appendix the diagnosis is comparatively easy.

The X-ray is of great value in certain cases in determining the presence and location of these bands. Dr. Pilcher's method of obtaining X-ray pictures of the entire large intestine is to administer at ten p. m. four to six ounces of sub-carbonate of bismuth in six ounces of mucilage of acacia with ten ounces of top milk. At the expiration of twelve hours, just before the picture is taken, an enema of the same mixture is given in order to obtain an outline of the sigmoid and descending colon as the mixture taken by the mouth may not have passed into the lower part of the large intestine.

In the cases of the movable cecum it is said that the symptoms are not quite so severe as when adhesions are present and the symptoms disappear by rest and the usual remedies for intestinal stasis, but soon return on exercise and indiscretions in diet.

The only method of accurately knowing the conditions present is exploratory incision. This method of diagnosis is reserved for those cases that have been thoroughly treated by abdominal supporters, proper exercise, diet, the use of enemas, laxatives, and intestinal antiseptics.

TREATMENT.

Abnormal conditions are so frequently found in cases of chronic appendicitis that the incision should be placed so as to admit of enlargement to allow of examination for iliocecal adhesions, the pelvic organs in the female, the right kidney, the gall bladder and the pylorus.

The incision through the skin, about one inch internal to the outer border of the right rectus, allows drawing inward of the muscle, and division of the posterior sheath of the rectus and peritoneum at a corresponding point. This incision appears to me to be the best, since the only objection is the difficulty of rapidly closing the wound, but in these cases rapidity of operation is not often necessary. Many operators prefer the incision along the outer border of the rectus muscle.

The indications for treatment consist in cutting all bands and remedying any sharp angulations of the intestine. All raw surfaces should be covered in by peritoneum to prevent reformation of adhesions.

The thin veil-like adhesions may not require removal unless they contain bands or cordlike formations which prevent normal peristalsis and do not allow of full relaxation of the intestine.

Connell's method of dealing with these adhesions consists in cutting the membranous formations freeing the intestine, twisting the membrane into a firm cord, and fastening it to the fascia in a line with the dorsal insertion of the meso-colon. This produces fixation of the cecum and prevents any future trouble from intestinal obstruction due to the cord. In two patients not relieved of their symptoms by appendicectomy I employed this method, resulting in a stormy convalescence from pulmonary embolism and phlebitis of the right lower extremity in one case and a good recovery from the operation in the other case.

In certain cases, where ptosis is the cause of the kink or the membranous pericolicitis, Dr. Lane either short-circuits the intestine or does an excision of the colon. Instead of these dangerous operations, Dr. Martin advises, after removing the adhesions, replacement of the viscera with the patient in the Trendelenburg position, retention of this position for the first week after operation, abdominal supports, forced feeding, and gymnastic exercises of the abdominal muscles.

CONCLUSIONS.

I. Lane's kink and Jackson's membrane are very common in patients with symptoms of chronic appendicitis.

II. An examination of the iliocecal region should be made in all cases operated upon for chronic appendicitis.

III. For the detection and removal of these adhesions larger incisions are necessary than we have been accustomed to make for simple appendicectomy.

IV. If these conditions are due to a displaced cecum an attempt should be made at fixation in its normal position.

V. All adhesions should be removed and the raw surfaces covered by peritoneum.

A gangrenous gall-bladder mucosa is usually easily stripped out (Mayo). It is a quicker proceeding than cholecystectomy, and provides more rapid healing than mere cholecystostomy.—*Am. Jour. Surg.*

Vermont Medical Monthly.

A Journal of Review, Reform and Progress in the Medical Sciences.

H. C. TINKHAM, M. D.,
B. H. STONE, M. D., } *Editors.*

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EDITORIAL.

The letter appended hereto has recently been sent by the State Board of Health to all physicians in the State and will, we trust, by impressing upon them their responsibility, work much good in the way in which it was intended. The figures presented are in some way very encouraging, but the mortality record for measles and whooping cough, shows a lamentable failure in efforts to check these diseases—a failure which requires some explanation. What, if any, is the fault in our public health service which is responsible for this increased prevalence and mortality from these so-called children's diseases? The answer to this query is not a difficult one. In only a few instances does the fault lie at the door of the properly constituted health authorities. It is very evident to any one who has given the matter any attention that there exists a lamentable degree of carelessness on the part of the public at large including, we regret to say, the medical profession in their attitude toward these diseases. The physician who fails to report these cases to the health officials can not be too severely condemned. Such a man

has failed in his highest duty to his profession, his clientele, and the public from whom he receives his license to practice medicine. As we can not believe that there are men in this profession so depraved that they would intentionally allow these diseases to spread, we must attribute any failure in this direction to culpable lack of thought. Any laxness on the part of the profession, however, at best only partly explains the situation. The lay public itself, is even more largely at fault. That any intelligent father or mother can knowingly allow their children who are infected with these diseases to associate with other children and thus spread maladies which may be fatal to them is difficult to believe. Ignorance may possibly be the excuse in some cases, but with the spread of knowledge regarding the communicability of these diseases, which has taken place within the last few years, this excuse becomes insufficient. It implies a degree of gross ignorance and illiteracy which is hardly conceivable. The condition seems rather to imply an utter disregard to the golden rule. The parent of average intelligence would never think of allowing his children to carry a dangerous weapon among their playmates, thus endangering lives, and yet instances are common where children of such parents, have been sent to school when they were obviously suffering from measles or whooping cough, thus imperilling with MUCH GREATER CERTAINTY the lives and health of a LARGER number of children. One such child carelessly sent to school may absolutely negative the results of careful quarantine in a hundred other instances. The law recognizes this responsibility and makes it very apparent in the following section, which is further amplified by the board of health rules printed with it.

"The head of a family in whose home there occurs a case of infectious or contagious disease dangerous to the public health shall immediately give notice thereof to the local health

officer of the town in which he lives. A physician who knows or suspects that a person whom he has been called to attend is sick or has died of a communicable disease dangerous to the public health shall immediately quarantine and report to the health officer the place where such case exists, and the name, degree of virulence and cause or source of the disease, and such other facts relating thereto as may be necessary for the health officer to make examination and act in the premises; provided that if the attending physician, at the time of his first visit, is unable to make a specific diagnosis, he may quarantine the premises temporarily and until a specific diagnosis is made, and post thereon a card upon which the word "quarantine" shall be plainly written or printed. Such quarantine shall continue in force until the health officer examines and quarantines as is provided in this chapter.

RULE I. The following diseases are hereby declared to be *communicable* or *dangerous to the public health* within the meaning of the statute, and shall be reported by heads of families and physicians to the health officer, viz.:

- Typhoid (enteric) fever.
- Typhus (ship) fever.
- Smallpox (variola, varioloid).
- Chicken-pox (varicella).
- Measles (rubeola, morbilli).
- Scarlet Fever (scarlatina, canker-rash).
- Whooping cough (pertussis).
- Diphtheria (croup, membranous croup).
- Cholera (Asiatic cholera, epidemic cholera).
- Yellow Fever.
- Bubonic Plague.
- Mumps (epidemic parotitis).
- German Measles (rotheln).
- Glanders.
- Hydrophobia (rabies).
- Epidemic Cerebro-Spinal Meningitis (spotted fever).
- Pneumonia (lobar or croupous pneumonia).
- Puerperal Fever (puerperal septicæmia).
- Epidemic Dysentery.
- Erysipelas.
- Leprosy.
- Tetanus (lock-jaw).
- Anthrax.
- Actinomycosis.
- Poliomyelitis.
- Ophthalmia neonatorum."

The possible plea that some families are not able to employ a physician to attend mild cases of measles or whooping cough, is not worthy of consideration since it costs nothing to notify the health officer. By so doing the head of the family relieves himself of all further responsibility in the management of the case except to follow the definite rules which are given him. The law furthermore prescribes for failure in these instances a penalty of equal severity for physicians and heads of the families, thus again recognizing an equal responsibility. A head of a family or a physician who fails to give reasonable notice to the health officer of the existence of such disease shall be fined not more than fifty dollars nor less than ten dollars, with costs of prosecution.

Furthermore the head of the family or a physician who by failure to properly report a case of measles or whooping cough, subjects another person to infection, with one of these diseases, becomes civilly liable for damage and we believe any court would thus hold if the sequence of infection could be properly established. Of course some exposures must inevitably occur owing to the difficulties of early diagnosis, but if the moral responsibility in this matter could be clearly brought home to people—if they could be made to see that they are not only civilly and criminally liable, but that they are likely to be responsible for an amount of suffering, invalidism, and possible death, beyond any power of reparation, by carelessness in these matters, we have faith enough in human nature to believe that there would be greater care and a consequent very material reduction in the prevalence in these preventable diseases.

*DEAR DOCTOR:—

The members of the State Board of Health present their compliments to you and beg to suggest that with the beginning of the year 1913 renewed effort be made by all physicians in Vermont to free our state of all forms of epidemic disease and add still further to its value as a place of residence and a resort for health and pleasure.

To this end, you will permit the board to call your attention specifically to Section 5454, which reads in part as follows:

A physician, who knows or suspects that a person, whom he is called to attend, is sick or has died of a communicable disease, dangerous to the public health, shall immediately quarantine and report to the health officer, etc.

The enclosed circular will give you a list of the diseases that are officially construed as “communicable” and “dangerous to the public health.” The board desires to call your attention especially to the word “suspects” in the above quoted statute.

Furthermore, the board also respectfully calls your attention to Section 5450 of the Vermont Statutes:

A physician who is consulted by a person subject to tuberculosis shall submit the name and address of such person to the secretary of the state board of health upon such blanks as it may furnish, with such other facts as may be required, within one week after such consultation, etc.

This act has been pretty generally ignored by the profession in the state. With the new year, we hope a new appreciation of the importance of this statute will come to all the physicians in the state.

*Sent by the State Board of Health to all Physicians in the State.

We all know that accurate and complete statistics in regard to the prevalence of any disease are absolutely essential in order to prevent such disease. Tuberculosis is no exception to this rule.

We wish also to call your attention to the continued prevalence of smallpox in a mild form in this state. This disease is always hard to control in the absence of general vaccination. This mild form of the disease, which is so prevalent now throughout the country, is especially difficult to manage. The common mistake of confusing this disease with chicken-pox has been the cause probably of most of our trouble. It is high time that every physician in Vermont should realize that smallpox may occur in mild form. Please give this matter thought and be prepared to recognize the first case that appears in your practice.

Vermont is making remarkable strides in the curbing of contagious and infectious diseases as the following figures will show:

AVERAGE NUMBER OF DEATHS IN VERMONT PER YEAR FROM CERTAIN INFECTIOUS DISEASES.

	1897-1901	1907-1911
Typhoid fever	105.4	49.6
Scarlet fever	17.8	8.2
Diphtheria and croup	73.	29.
Tuberculosis	499.6	419.6

These figures are instructive. They show real progress in disease-prevention. When the fatalities from typhoid fever, scarlet fever and diphtheria can be reduced over 50 per cent in a decade, why not complete the work and really stamp them out?

The following figures are not as gratifying:

AVERAGE NUMBER OF DEATHS PER YEAR FROM MEASLES AND WHOOPING COUGH IN VERMONT.

	1897-1901	1907-1911
Measles	25.6	29.6
Whooping cough	22.8	40.2

You will observe that while we are stamping out all the major infections, and those that were formerly the dread of every physician, we are allowing two of the commonest so-called "children's diseases" to make headway and become increasingly fatal. This is not wholly due to negligence on the part of the physician. The public should be informed of the increasing fatalities from these diseases. Measles and whooping cough are really more dangerous at the present time than scarlet fever and diphtheria. Everybody should appreciate these facts. May we not depend on you to spread this information and do your part towards improving conditions? Report your cases of measles and whooping cough as faithfully and as promptly as scarlet fever or smallpox and insist on your patients observing the restrictions placed upon them by the modified quarantine.

If a comparison should be made between the last five years and twenty or thirty years ago, the figures would be still more striking. The results already attained show that we may expect in the near future to practically eliminate typhoid fever, scarlet fever and diphtheria from our mortality tables.

The figures given show that one hundred and sixty-seven lives are now being saved to the state every year from these seven diseases alone, that ten years ago would have been lost. Furthermore we know that these lives are saved at an age when they are the most valuable to our commonwealth. They are not the old or decrepit.

While we congratulate ourselves on these results, let us remember that the presence of typhoid fever, measles, scarlet fever, or even tuberculosis, is a reproach on our civilization; that they are all unnecessary. When we live up to our sanitary knowledge and our sanitary ideals, these diseases will be unknown.

The State Board of Health appreciates the uniform support which it has received from the

great majority of practitioners in the state in its efforts to improve sanitary conditions in general and suppress contagious diseases in particular. This work must go on and with your assistance, we will make the next year a record one, as far as the suppression of epidemic diseases is concerned.

Very respectfully yours,
STATE BOARD OF HEALTH.

CHAS. F. DALTON,
Secretary.

ADVERTISMO OCCULTA—A RECENT DISEASE.

Advertismo occulta is not yet described in text-books, though numerous sporadic examples have occurred within a year. Students of mental diseases would describe it as a form of "exhibitionism." It is an affection of the sense of justice. Recently a well known surgeon came down with it. A review of the reported cases seems to show that this disease particularly affects surgeons. In brief, advertismo occulta is that form of advertising in the lay press or magazines, of which the subject (hero) is not supposed to be aware that he is being described. You can depend upon it, they know absolutely nothing of the event previously to being written up. And this can be proven most readily. For example, a certain writer recently desired to reproduce an illustration out of a magazine. He found that in order to do so he had to get a written permission from the publishers and go through considerable red tape. Now these write-ups of famous men in our profession are usually accompanied by quite a number of personal photographs and that of the insides of their shops. You see therefore, our heroes could know absolutely nothing about it previously to being described. You don't see it yet? Well now, that's strange. Read it again.

It is a source of grief and humiliation to the really ethical surgeon or physician to read the exploitation in the lay press, of any living medical man or group. It is not *noblesse oblige*. Medicine and surgery of today are too sacred to be handled by those who have not been ordained. They do not know and never will know the psychologic nuance which distinguishes physicians from other men and the practice of medicine from other professions.

To show the laity a picture of an operating room or of the surgeon who has removed so many spleens and livers, is to shock the timid, arouse the curiosity of the morbidly inclined and to plant the seed of fear in the neurotic. For all lay press articles on physicians and their armamentarii are garnished with flowery impossibilities, tainted with medieval imagination and interspersed with chimerical prophecies.

After a fashion the individual thus written up becomes a sort of demigod to the public. The result is sure to be remunerative. If there was no tangible return many would not expose themselves, so to speak. The reaction to the hero is not always salutary. Besides suffering in self-respect, he is liable to suffer in his art. Take, for example, the case of a famous umbilical specialist. By virtue of a good physique, perfect health and working twenty-two hours a day, he can attend two hundred cases a month. A well worded *advertismo occulta* will bring him in about ten more cases a month. What are the consequences? Either he neglects (he does, by the way) some of his cases altogether or all of his cases somewhat, for he already worked to the last notch of physical ability prior to the coming of the additional ten. He also becomes a nuisance, for patients will force their family physician to call such a man in consultation when the former's better judgment urges him not to.

Several occult advertisements in the lay press have sent New England and New York surgical

patients out west. With better results than would have obtained in their home town? Not at all. They die just as often as it is their turn to do so, but pay more for the privilege. Certainly the long train ride doesn't increase their resistance.

Have you noticed by the way that genito-urinary surgeons and gynecologists don't stand in at all on the newspaper boost? In their name let us protest against the seeming iniquity. A dermoid cyst with its teeth and hair is really more interesting reading than an intestinal anastomosis or plastic operation on the gall-bladder.

There can be no compromise in medical advertising. The example is bad. If the prominent men do it, the less known will get into print as soon as they can raise the price or work up enough pull with a magazine writer. Let there be no mistake on this point. Educating the public on general health problems and teaching them the lesson on how to live is the noblest duty of the physician. It is a duty that is self-sacrificing and is indicative of the priestliness of the calling. Would that physicians were so situated that they could teach health from the housetops and street corners. But when a description and photographs of a physician and his pill cupboard or of a surgeon and his amphitheatre and instruments appear in public print, it is as if they are courting public patronage.

A certain one's vaccine, operation or drug specialty exploited in the lay press creates a public belief that is false and at times dangerous, for his vaccine will not cure all, the operation may not always succeed and drugs in the hands of the laity are double edged swords. Several years ago a pneumococcic vaccine was written up in a lay magazine which gave to that serum an almost deific property. Even now you will hear friends of some pneumonia patients ask if you wont "get that western doctor's pneumonia serum." Yes sir, this is talking from experience.

The recording by the lay press of an heroic deed or wonderful act on part of a physician or surgeon is highly desirable for it increases the respect in which the profession should be held, but there is no excuse for assisting a writer to project a half-baked truth or an incomplete discovery on the necessarily ignorant public. A searching examination of such an article would unquestionably show that someone looking for personal aggrandizement is behind it. No, not in all of them of course.

The newspapers are not responsible. Doctors and their doings make interesting reading. Just think however, of the recent newspaper exploitation of the lactic acid bacillus treatment for diabetes, to which were appended interviews with the "doctors" who had a personal acquaintance with the bug. You undoubtedly have heard of the famous French surgeon who has repeatedly discovered a cure for cancer. Several American cancer patients have already died in France as a result of being cured by him.

Taken altogether, medical advertising whether done openly or behind a screen, is dangerous. The fact that physicians and surgeons deal with the naked truths of life and are the guardians of their patients' innermost secrets, is one of the greatest reasons against advertising of any kind. Most of our patients give us their full confidence because they are aware of our ability to keep it to ourselves. This belief would receive a terrific jar if we had to advertise for it.

Madam X suffering with an annoying leucorrhea, had been unsuccessfully treated by a number of physicians. By a sheer stroke of luck *you* cured her. How would you advertise the result? Yet think of the number afflicted with this trouble who would hail you as a redeemer. Advertising requires an exposé of your goods.

One of the noblest acts performed by medical men is their generosity in publishing via the proper channels, discoveries in medical science. They give their inventions and methods freely, often at a personal sacrifice. How quickly it would all cease if each man advertised his wares directly to the public. There can be no doubt today in your mind of the value of 606 in the treatment of syphilis. Supposing a man of Ehrlich's standing advertised to cure this ugly disease and demonstrated its value beyond contention, what would be *your* chances for treating syphilis?

Advertismo occulta must be regarded as a disease process of our professional fibre. Like tetanus, its evidence may be only a tiny scratch but what of its action!

B. JOSEPH.

The following extract from an article written by Dr. Friedrich Frang Friedman and published in the *Berliner Klinische Wochenschrift* explains the nature of the Friedman treatment for tuberculosis which has attracted so much hysterical comment on the part of the lay press.

"The task was to find as a curative agent a substance absolutely harmless even in large doses, which should contain if possible all the specific properties of the exciting agent, (tubercle bacillus) excepting its toxicity and virulence. This, then, had to be an avirulent atoxic bacillus. But this avirulence, this freedom from all pathogenic power, could not be attained through any severe treatment of the culture through various additions, etc., it had to be a bacillus of natural avirulence, and moreover, it had to be avirulent and atoxic in tuberculous, as well as in non-tuberculous individuals. And finally the exceedingly delicate antigens could not be effected by the slightest treatment; hence it had to be a living bacillus. For even the apparently mildest methods of killing the bacillus affect the finest molecular constitution of its or-

ganism. All these factors being considered, a substance adapted to the cure of tuberculosis must fulfil the following conditions:—It must consist of genuine living bacilli, of natural complete avirulence, and not subjected to any deleterious influences, additions, etc.”

The writer then describes his experience in obtaining a strain of tubercle bacilli which fulfils these requirements. “At first this strain was not adapted to therapeutic use in humans; only after I had succeeded in removing the last and slightest traces of virulence, through proper transplantations and passages, did I employ the preparations in humans. At first, I repeatedly injected myself, then tuberculous adults, later tuberculous children, and finally, as the curative effects were constantly confirmed, I injected children for purposes of immunization.

Up to the present time I have treated with this preparation 1012 individuals.

In every method of use—subcutaneous, intramuscular, intravenous, per os, conjunctival, locally applied to exposed tuberculous areas—the preparation has shown itself to be absolutely harmless, even in large doses. The treatment exists in its intramuscular administration, once, twice, or three times (seldom oftener), at long-time intervals. Success or non-success depends upon the complete absorption of the preparation. An infiltration must be formed at the site of injection, in size between that of a nut and a small apple, which in the course of the succeeding weeks or months gradually disappears. So long as this tissue exists, and is being gradually absorbed, the healing takes place.

Only when the injected remedy is completely taken up and remains in the body do the striking curative effects appear. These regularly appear soon and continue. Under the influence often of but a single injection, we see bone and joint fistulae of several years’ standing becoming clean and closing, scrofuloderma becoming

covered with young healthy skin, large hard gland tumors becoming considerably smaller, tuberculous abscesses flattening off and cicatrizing, chronic scrofulous eczematata clearing up—and last but not least—pulmonary consumptives losing all the symptoms and physical signs of their disease.

In those cases of external tuberculosis, bone and joint tuberculosis, in which the preparation has been absorbed and cure has followed relapses do not take place. This cure has nothing to do with what is often called the cure of fistulae which consists in temporary cessation of secretion, possibly also superficial closing, with, however, persistence of a bluish-red tender swelling. Instead, firm non-sensitive scars are formed which gradually become pale. Aside from one hopeless case with complete destruction of the pelvis, peritonitis and advanced amyloid degeneration, and two other 75-year-old women with dry crumbling caries, the whole series of twelve cases of bone fistulae treated by me have been cured.

Tuberculous glands quickly recede if the curative agent is well absorbed. This I have observed in more than thirty cases. I could demonstrate to you many of such cases; here is but one of painful glandular swelling the size of a hen’s egg, covered with smeary scabs. It became painless after one injection and healed perfectly.

Cases of pulmonary consumption, in which the degenerative and destructive processes have not proceeded too far, show almost without exception a recession of the manifestations. Of course those cases which are already irretrievably at the point of death, in which cavities are present in the lungs, possibly complicated with advanced tuberculosis of the larynx or intestine or rectal fistulae—such cases cannot be saved by this remedy. Six such very advanced cases among a total of 250 cases of pulmonary consumption could not be saved and died, in spite of distinct beginning improvement.”

DIABETES MELLITUS.

I am undertaking an exhaustive research into the pathology, etiology and dieto-therapy of Diabetes Mellitus. I am very anxious to hear from every physician in the United States who has a case under treatment, or who has had any experience in the treatment of this malady. Von Noorden says "the best treatment for the diabetic is the *food* containing the *greatest* amount of *starch* which the patient can bear without harm." If any physician who reads this has similar or contrary experience, and would take the trouble to write me, I would esteem it a special privilege to hear from him, if only a postal card.

Kindly address, William E. Fitch, M. D., 355 W. 145th St., New York City.

PHILIPPINE CIVIL-SERVICE EXAMINATION.

The United States Civil Service Commission announces an open competitive examination for chief of the department of medicine, Philippine General Hospital, for men only. From the register of eligibles resulting from this examination certification will be made to fill a vacancy in this position in Manila, Philippine Islands, at a salary of \$4,000 a year, and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

It will not be necessary for applicants to appear at any place for examination. Their eligibility will be determined upon the evidence furnished in connection with application and examination Form B. I. A. 2 concerning their training and the work which they have accomplished.

The commission is advised that this position offers to the ambitious and capable physician opportunities which are far above the average. The Philippine hospital is probably the best institution of its kind in the Eastern Hemisphere, of 350 beds capacity, with an equipment which will compare favorably with that of any hospital in any part of the world. The new conditions, and the as yet undescribed diseases, that are constantly encountered furnish a wide field to one who is deeply interested in his profession. As a further aid to his work (which is wholly medical, the administrative duties being in

charge of a superintendent) the Bureau of Science, which is on the hospital grounds, has one of the largest and most favorably known research laboratories in existence. It is also stated that if after a year's trial the services rendered prove thoroughly satisfactory, promotion may be possible. The position is stated to be permanent during good behavior and satisfactory service.

Applicants must be graduates in medicine, must have had thorough laboratory training followed by good clinical experience in a general hospital, and must be desirous of continuing in the field of internal medicine. It is necessary that the person appointed be a scientific and experienced physician, possessed of extended training acquired in a medical position of responsibility, as for example, attending, or in charge of, the medical side of a large metropolitan hospital. In addition, he must be of good address and antecedents, capable of commanding the respect of the community, and tactful, considerate, and courteous in his dealings with patients and with the public.

Statements as to training, experience, and fitness are accepted subject to verification.

Applicants must have reached their twenty-eighth but not their fortieth birthday on the date of the examination.

The medical certificate on Form 2 must be filled in by some medical officer in the service of the United States. Applicants should appear before medical officers of the Army, Navy, Indian, or Public Health services. If such an officer can not be conveniently visited, a pension examining surgeon may execute the certificate. Special arrangements have been made with pension examining boards throughout the country to give such examination for a fee of \$2, to be paid by the applicant. This certificate must not be executed by the family physician of the applicant. The medical officer should indicate his rank or official designation on such certificate. When it is impracticable, by reason of the applicant's distance from a government physician or a pension-examining surgeon, to have the medical certificate executed by such physician, it may be executed by any reputable physician. Such person may be required to undergo another examination in case of appointment.

Each applicant will be required to submit with his application a photograph of himself, taken within three years, which will be filed with his

papers as a means of identification in case he receives appointment. An unmounted photograph is preferred. The name and date of examination, the competitor's name, and the year in which the photograph was taken should be indicated on the photograph.

This examination is open to all men who are citizens of or owe allegiance to the United States and who meet the requirements.

Special attention is invited to the favorable conditions in respect to transportation, leave of absence, clothing, etc., in this service printed hereon.

Persons who meet the requirements and desire this examination should at once apply for Form B. I. A. 2 to the United States Civil Service Commission, Washington, D.C.; the secretary of the board of examiners, post office, Boston, Mass., Philadelphia, Pa., Atlanta, Ga., Cincinnati, Ohio, Chicago, Ill., St. Paul, Minn., Seattle, Wash., San Francisco, Cal.; customhouse, New York, N. Y., New Orleans, La., Honolulu, Hawaii; old customhouse, St. Louis, Mo., or to the chairman of the Porto Rican Civil Service Commission, San Juan, P. R. No application will be accepted unless properly executed, including the medical certificate, and filed with the Commission at Washington prior to the hour of closing business on February 17, 1913. In applying for this examination the exact title as given at the head of this announcement should be used.

Issued January 13, 1913.

INFORMATION RELATIVE TO EMPLOYMENT IN THE PHILIPPINE CIVIL SERVICE.

Opportunities.—The civil service of the Philippine Islands offers excellent opportunities to qualified persons both in the matter of salary and promotion. Under the operation of the civil-service law promotions may be made on the basis of merit from the lowest to the highest positions, and the records of that service indicate that qualified appointees have been rapidly advanced.

Age limits.—The age limits for the service are 18 to 40 years, unless otherwise expressly stated under description of examination.

Photographs and medical examination required.—Each applicant for the Philippine Service will be required to submit to the examiner, on the day he is examined, a photograph, taken not

more than three years ago, of himself, which will be filed with his examination papers as a means of identification in case he receives appointment. An unmounted photograph is preferred. The date, place, and kind of examination, the examination number, the competitor's name, and the year in which the photograph was taken should be indicated on the photograph.

The medical certificate in Form 2 must be executed by some medical officer in the service of the United States. Applicants should appear before medical officers of the Army, Navy, Indian, or Public Health and Marine-Hospital Service. If such an officer can not be conveniently visited, a pension-examining surgeon may execute the certificate. Special arrangements have been made with pension-examining boards throughout the country to give such examination for a fee of \$2, to be paid by the applicant. When it is impracticable by reason of the applicant's distance from a government physician or a pension-examining surgeon to have the certificate executed by such a physician, it may be executed by any reputable physician. Such a person may be required to undergo another physical examination in case of appointment. *This certificate must not be executed by the family physician of the applicant.* The medical officer should indicate his rank or official designation on such certificate.

Transfers.—Under the Federal civil-service rules, employees who have regularly served for three years in the Philippine civil service are eligible for transfer to similar positions in the Federal Service. A person separated after three years' service without the delinquency or misconduct may be reinstated for purpose of transfer, if no objection is raised by Philippine authorities, at any time during his eligibility for reinstatement.

Clothing.—Americans usually dress in white drill suits. Those who go to the Philippines will find it to their financial advantage to wait until they reach Manila before purchasing any clothing for use in that climate. Serviceable white cotton drill suits are made to order in Manila for about \$3 each. Heavier clothing, adapted to the climate at times, can also be purchased at very reasonable prices.

Medical attendance.—At present medical attendance is furnished to employees in Manila without cost. A civil hospital has been estab-

lished in Manila, to the first-class wards of which civil-service employees are admitted at a charge of \$1.50 a day, with medical and surgical attendance, medical supplies, nursing and food included. Those who desire private rooms are required to pay \$3 per diem for room without bath and \$5 for room with bath.

Leave of absence.—(1) Regularly and permanently appointed officers and employees (excepting teachers) after at least two years' continuous, faithful, and satisfactory service, are granted—subject to the necessities of the public service—accrued leave of absence with full pay, inclusive of Sundays and legal holidays, for each year of service in accordance with the following schedule: Annual salary \$600 to \$900 with board and quarters, or annual salary of from \$900 to \$1,800, 30 days; annual salary \$1,800 or more, 35 days. Leave accrues while on duly authorized leave. (2) Persons in the teaching service shall not be granted leave in accordance with the foregoing schedule, but in lieu may be granted leave on full pay during vacation periods. (3) An employee who has served three years or more may be granted permission to visit the United States, entitling him to half pay for 60 days in addition to the period of leave granted.

In addition to the leave mentioned, an employee, other than a teacher, who has served six months or longer and receives a salary less than \$1,000 may be granted 21 days' vacation leave, and an employee receiving \$1,000 or more or a trained nurse may be granted 28 days' vacation leave, such leave being in lieu of "sick leave." Absence of teachers, due to sickness, may be offset by their remaining on duty for an equal period during vacations.

Transportation.—A person residing in the United States who is appointed to the Philippine civil service may pay his traveling expenses from the place of his residence in the United States to Manila: *Provided*, That if any part of his traveling expenses is borne by the government of the Philippine Islands, 10 per cent. of his monthly salary shall be retained until the amount retained is equal to the amount borne by the government. *And provided further*, That if he shall come by the route and steamer directed, his actual and necessary traveling expenses shall be refunded to him at the expiration of two years of satisfactory service in the Philippines.

There is no provision for the allowance of return transportation.

He shall be allowed half salary from the date of embarkation and full salary from the date of his arrival in the islands: *Provided*, That he proceed directly to the islands; otherwise he shall be allowed half salary for such time only as is ordinarily required to perform the journey by the route directed: *And provided further*, That such half salary shall not be paid until after the expiration of two years of satisfactory service in the Philippines.

A person residing in the United States accepting an appointment to a position in the civil service of the government of the Philippine Islands shall, before receiving such appointment, execute a contract and deliver it to the Chief of the Bureau of Insular Affairs, War Department, wherein the appointee shall stipulate that he will remain in the service of the government of the Philippine Islands for at least two years, unless released by the governor general or proper head of a department. A breach of the conditions provided in the contract or a removal for cause shall require the proper officer to withhold payment of all salary and traveling expenses due to the person employed and who has violated the conditions of his contract or been removed for cause, and shall debar such person from ever entering again the public service of the Philippine government in any of its branches. In such case an action shall lie for the recovery of the amount expended by the government in bringing the employee to the Philippine Islands.

No examinations are held and no appointments are made in the United States to fill ordinary clerical positions in the post office, custom-house, and internal-revenue services and in trades positions in the Philippines. Thus far no difficulty has been experienced in filling such positions through the appointment of Filipinos and of Americans resident in the Philippine Islands. It is useless for persons in the United States to seek appointment to positions in the Philippine civil service unless they have professional, technical, or scientific qualifications, or special clerical ability with special qualifications, such as those of a stenographer and typewriter, agricultural inspector, forester, etc.

Examinations for trades positions in the Bureau of Printing of the Government of the

Philippine Islands are held only as the needs of the service require. This service requires men of all-round proficiency. They are designated "craftsmen instructors" and must possess ability to instruct Filipinos in all the specialties of the various trades, and besides must have executive ability. Only exceptionally well-qualified men will be considered.

Applications for information concerning examinations for the Philippine Service should be addressed to the Civil Service Commission, Washington, D. C.

After a person has passed an examination, all correspondence relating to the question of his appointment to the Philippine service should be addressed to the Chief of the Bureau of Insular Affairs, War Department, Washington, D. C. All such eligibles should keep that bureau advised as to any changes occurring in their post office and telegraphic addresses.

NEWS ITEMS.

Certain agents in New York City have been trying to locate the source from which opium has been supplied illegally. Two men connected with wholesale drug firms were recently arrested for sales of the drug for illicit purposes. They sold the prepared drug at a higher price per pound than gold commands.

The appellate division of the Supreme Court in Brooklyn, N. Y., has just decided that child may not sue for injuries suffered before birth. The mother of the child was thrown to the street while alighting from a trolley car and was injured. Thirty-six days later she gave birth to the boy who was a cripple and, as was claimed, will be deformed for life.

During the calendar year 1911 reports were received by the surgeon general of the United States Public Health Service from the health authorities of 29 States and the District of Columbia, giving the occurrence of smallpox as notified in their respective jurisdictions. In these States there was a total of 21,768 cases and 134 deaths reported. During the year 1910 there were notified in these same States 25,598 cases with 403 deaths, and in 1909, 20,679 cases with 132 deaths.

Dr. James F. Bothfield died Jan. 12 in Newton, Mass., aged 47 years. He commenced the prac-

tice of medicine in Concord, N. H., where he was associated with Dr. Jacob H. Gallinger, now senator. He was a graduate of the Boston University.

Dr. Ezra B. Aldrich, aged 72 years, for many years in practice in Manchester, N. H., died January 13th in that city.

Dr. D. C. Noble of Middlebury is ill in the Rutland hospital with a complication of diseases—arteriosclerosis and an enfeebled heart.

Dr. F. C. Sanborn of New Haven, Vt., is at present looking after the practice of Dr. D. C. Noble. He is living in Middlebury.

Dr. H. L. Townsend of Bridport is critically ill and his friends are much alarmed at his condition.

Dr. C. E. LaPoint died recently at Rutland.

Dr. C. W. Peck of Brandon is just recovering from a severe attack of lagrippe. The infection was confined to the nostrils and affected his eyes so that his field of vision is impaired. Dr. G. G. Marshall of Rutland is attending him and reports improvement.

There is an outbreak of smallpox at Mount Holly with one death reported.

Governors of several States have appointed delegates to attend a conference on State control of the milk supply and tuberculosis in cows at the Academy of Medicine, Feb. 5 and 6. Among the States in addition to New York which will have representatives at the conference are Massachusetts, Rhode Island, Connecticut, Pennsylvania and Maryland. Dr. John S. Anderson of the Public Health Service and Dr. A. D. Melvin, chief of the Bureau of Animal Industry, will represent the Federal Government. The second day of the conference will be devoted to a discussion of the present method of dealing with tuberculosis in cows.

Dr. Edgar C. Syrett of West Springfield, Mass., died at his home Jan. 6th, after a 4 days' illness. Dr. Syrett was born in London, England, in 1872, but early removed with his parents to Springfield. He graduated from the College of Medicine of the University of Vermont in 1898. He has practiced his profession at West Springfield ever since.

The ninth annual conference of the American Medical Association on Medical Education, Medical Legislation and Public Health, called by the Council on Medical Education and Council on Health and Public Instruction will be held at Congress Hotel, Michigan avenue and Congress street, Chicago, Ill., February 24 and 25, 1913.

The medical Society of King's County prosecuted recently and secured the conviction of Prof. Peter Maniscalco and his assistant, Louis Roberts for conducting a magnetic sanatorium in Brooklyn where they advertised to absolutely cure neuralgia, St. Vitus dance, nervous hysteria, loss of memory, paralysis, locomotor ataxia, epilepsy, rheumatism, insanity, insomnia, somnambulism, morphinomania, wickedness, kleptomania, jealousy, and a few other things by means of hypnotic therapeutics.

Dr. E. O. Ranney, an old time practitioner died at Orleans, Vermont, January 15th. He was born in Irasburg in 1840. After serving one year in the navy he served in the army one year and thereafter practicing in Lunenburg, Vt., located at Barton Landing, now called Orleans. He graduated from the medical department of Columbia College, New York.

Harvard College has established a tropical course in medicine. Dr. Robert Pearson Strong, director of the government biological laboratory at Manila, has been secured as its head.

The following is a quotation from an editorial of a New York paper entitled Hospital Abuses:

The decision of the Sinking Fund Commission to reconsider its transfer to the Hahnemann Hospital of title to the block at Park avenue and Sixty-eighth street for the nominal sum of \$5,000 appears to be justified by the circumstances, if it be true that the agreement on the part of the hospital to treat as far as possible all poor patients presenting themselves has not been complied with. The high position of the Hahnemann Hospital among our eleemosynary institutions entitles it to all fair and just consideration on the part of the city authorities. But the enormous value of the property demands of them a careful and judicious consideration on behalf of the taxpayers, who are already overburdened by the exemption from taxation of many semi-charitable institutions. The hospital system of this city has undergone a mutation so gradual

and yet so radical during the past half century that the injustice to the destitute involved in the change has been overlooked. Some of our great hospitals derive large incomes from private patients who pay from \$15 to \$100 a week, besides extra charge for extra nursing, and a tendency has been to enlarge this branch of the service at the expense of the eleemosynary side of the institution.

The announcement is received of the marriage of Mr. John S. White, the well known representative of John Wyeth & Bros., and Miss Laura J. Pierson, of East Topsham.

Dr. C. R. Aldrich of Brattleboro is about to resume practice after ninety days' sickness from typhoid fever.

Dr. Franklin G. Hummiston of East Jaffrey, N. H., died Dec. 31 in the Eliot Hospital, Manchester, N. H., of heart failure after an operation. He was a graduate of Dartmouth and of the University of Pennsylvania. He was 57 years old and had practiced in East Jaffrey for 26 years.

Dr. Stephen H. Blodgett of Boston was elected president of the Boston district, Massachusetts Homeopathic Medical Association, at the annual meeting held in Boston recently. Dr. Blodgett is a graduate of Harvard, '84, and the medical school, '86.

The Health Board of Boston has just adopted, after much opposition from market men and produce exchange representatives, new rules which oblige the market men to keep food stuffs covered while exposed for sale. Furthermore those who handle the goods must be clean and dressed in clean garments.

The Federation of State Medical Boards will hold its annual meeting at the Congress Hotel, Chicago, on Tuesday, February 25th, 1913.

Essayists, eminently qualified, will prepare papers upon the following subjects:

"Is Universal Reciprocity to be Desired?"

"Should Medical Boards Require One or More Years of College Work Preliminary to the Study of Medicine?"

"Should One or More Years in a Hospital be Required for Admission to the Examination for Medical Licensure?"

"Rules and Regulations Governing Examinations for Medical Licensure."

"Qualification of Examiners."

"What Fee Should be Required for the Examination?"

"Benefit of Having a Single Federation of State Medical Boards and Method of State Board Record Keeping."

"Means of Keeping Politics Out of State Board Affairs."

These topics are all of practical and vital interest to medical colleges, medical examining boards, the profession at large and the public.

Those contributing the papers on these subjects come with years of experience and no medical board can afford not to be represented. An earnest and cordial invitation to this meeting is extended to all members of State Medical Examining and Licensing Boards, teachers in medical schools, colleges and universities, delegates to the Council on Medical Education of the A. M. A., to the Association of American Medical Colleges and to all others interested in securing the best results in medical education and legislation.

The officers of the Federation are Arthur B. Brown, M. D., president, New Orleans; George H. Matson, M. D., secretary-treasurer, Columbus (State House), Ohio; James A. Duncan, M. D., Chairman Executive Committee, Toledo.

In the list of members of the State Society published in the January issue, the name of Ray Ernest Smith, Rutland, Vt., was inadvertently omitted. Dr. Smith is a member of the Rutland County Society.

BOOK REVIEWS.

THE FIRM OF E. MERCK & COMPANY has just published the 25th volume of their Annual Report of Recent Advances in Pharmaceutical Chemistry and Therapeutics.

The current issue is larger than usual, and includes comprehensive special articles on "The Glycerophosphates" and "The Digitalis Glucosides and Allied Drugs"—in line with the decision reached a few years ago to increase the value of the annual report as a reference work by the addition of chapters in which certain groups of drugs are discussed as fully as possible, with reference to the original literature. Those interested are thus enabled to make themselves thoroughly familiar with a certain field of pharmacological research, and to trace further developments in succeeding issues.

FELLOWS HYPOPHOSPHITE COMPANY have just issued a little booklet entitled "Some Don'ts—Medical and Surgical."

The book contains many useful hints and suggestions emphasizing some of the common sins of commission to which the medical profession is subject.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

INTESTINAL INTOXICATION.

Auto-intoxication is, according to CARL VON NOORDEN, Vienna, Austria (*Journal A. M. A.*, January 11), one of the most misused words in medicine. As first applied to the final stages of diabetes and in uremia and cholemia it could be properly used, but its later application to all forms of pathologic conditions of non-microbic origin is a misuse. In the so-called intestinal forms this is most markedly the case; with the exception of certain conditions in infants the term intestinal auto-intoxication should be rejected completely. One may speak intelligently of auto-intoxication only when the poisons are formed by the tissues of the body itself, the so-called endogenous poisons. We know practically nothing, however, of the poisons which are formed in the wall of the stomach or intestines. On the other hand, we know that the contents of the intestines are a rich source of poisons both through the peptic and tryptic digestion and by the action of bacteria decomposition. How detoxication occurs and health is preserved is unknown. Von Noorden considers this one of the most important biologic problems of the future. Valuable attempts at its solution have been made by Metchnikoff, but he goes too far in his assumptions and conclusions. All these toxins, however, are exogenous and, while man is able to protect himself against the most of them, there are others, like the cholera toxin, which are beyond his power, hence the importance of diet regulation and care in the prophylaxis. After these remarks Von Noorden describes a special form of intestinal intoxication studied by him, in which there is a certain degree of constipation and retention of fecal contents in the sigmoid flexure; certain symptoms, like a feeling of fulness after eating, which the patients usually refer to the stomach which empties itself slowly and develops a high degree of acidity. Examination of the abdomen reveals over the sigmoid a certain point sensitive to pressure, which corresponds to McBurney's point in appendicitis, and which he calls the S point. Diarrhea may occur instead of constipation from the irritation of the fecal masses which are retained by spasm of the intestinal wall. In many cases the symptoms are restricted to those mentioned, but in others a peculiar clinical picture appears, wandering pains all over the body from the trigeminal area to the sciatic. The joints may also be affected, and we have here a mild polyneuritis with circulatory phenomena indicating irritation in the vagus area, such as slow pulse, extrasystoles, dermatography, etc. In the majority an unusual excretion of indican is found. Von Noorden's assistant, Dr. H. Eppinger, has been able to extract a poisonous substance from the feces

(Continued on page xiii)

OVER

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THERAPEUTIC NOTES.

RAISING THE INDEX OF RESISTANCE IN INFECTIONS.—For the purpose of restoring vigor to an organism weakened through a pneumonia or a long continuing bronchitis and thus rendered easily susceptible to a tubercular infection, Cord. Ext. Ol. Morrhuæ Comp. (Hagee) possesses value of an easily demonstrated character.

In the preparation of Cord. Ext. Ol. Morrhuæ Comp. (Hagee), a process is employed which, while freeing the product from the obnoxious qualities of cod liver oil, retains the elements upon which the therapeutic and food value of the oil depends. This is a point which should be borne in mind in choosing a cod liver oil preparation for patients whose digestive organs are easily deranged.

Of course, while it is in bronchial and pulmonary diseases that Cord. Ext. Ol. Morrhuæ Comp. (Hagee) has its greatest field of usefulness yet its use should not be limited to these diseases alone, for its power as a tissue food insures results from its employment in all conditions marked by decline of strength.

A SEVERE BURN.—By H. B. Lee, M. D., Summer-ville, S. C. My first use of Antiphlogistine in burns and scalds was accidental. I was called by telephone to Mr. J. T., aged twenty-seven, weight 180 lbs., brick-maker, a steam-pipe having exploded between his legs, scalding him badly. I ordered that no grease of any kind be used, but that cloths soaked in a strong solution of bi-carbonate of soda should be laid on the parts till I could get there. I stopped at a drug store to procure another salve I had used in such cases, and by mistake the clerk gave me two boxes of Antiphlogistine. When I reached my patient I found him suffering intensely with a big blister extending from the crotch to the ankle on the inner side of both legs, at least three inches wide and surrounded by a red inflamed surface two inches wide on each side.

I had used Antiphlogistine before in pneumonia and in sprains, so when I found that by mistake this had been sent I decided to try it. I covered the entire injured parts with a thick layer of Antiphlogistine (applied cold), put absorbent cotton over all, and after bandaging loosely to keep things in place, took Mr. T. home in my buggy. When I first saw him his face was contorted with pain and he could not suppress the groans that the agony wrung from him, but, as I covered more and more of the burnt surface with the dressing, I could see the expression of pain leaving his face. I gave him some medicine to relieve pain and when I called again that evening I found he had not touched the anodyne. I asked him why he had not touched his medicine. "Well, doctor," he said, "you told me to take that every two hours while I was in pain and I have not had any pain."

The next day I let him leave his room and in three days he was back at work. I did not touch the dressing for five days, and when I took it off the parts had healed entirely.

There are two important points in the use of Antiphlogistine. First: put it on thick, thick, using it hot for internal inflammations and cold for burns and scalds. Second: never put cloth over the Antiphlogistine, except a thin layer of gauze, if necessary, but put absorbent cotton in thick layers over your

first dressing. Don't try to remove it as long as it sticks to the skin for it will let go as soon as it has done its work. I have used this preparation (Antiphlogistine) frequently since then in severe burns and scalds and yet have to meet my first disappointment in its curative power.

SLEEPLESSNESS IN ACUTE DISEASES.—Its freedom from danger and depressing after effects, eminently qualifies PASADYNE (Daniel's Concentrated Tincture of *Passiflora Incarnata*) for use as a sleep producing agent in acute processes made less tolerable by sleeplessness.

The advantage of a safe hypnotic in the presence of a circulatory apparatus weakened by toxic products evolved in acute diseases, will be appreciated by all medical men, and it is by reason of this element of safety, as well as freedom from depression, that PASADYNE (Daniel's) has come into such popular use.

For securing sleep this agent may be just as confidently relied upon as chloral or the bromides. The desired therapeutic effect is obtainable in a short time and is lasting, affording a most restful sleep with a minimum of dosage. PASADYNE (Daniel's) will prove agreeably surprising to those who have not yet tested its merits.

A MODERN TREATMENT OF INFECTION.—A new agent that will yield 90 per cent. of recoveries out of a total of four thousand cases of infection is worthy of consideration. The Phylacogens, prepared by Parke, Davis & Co., are credited with this performance. Reports of the success attending the administration of these bacterial derivatives have been appearing with much frequency of late—reports so startling in their nature that one would hesitate to credit them were they not known to emanate from competent and conservative practitioners. These reports compel the belief that in the Phylacogens we have a group of truly remarkable agents—products that will be makers of medical history; that are capable of producing results that may be designated as most unusual.

The Phylacogens are supplied in rubber-stoppered glass bulbs of 10 Cc. capacity and are administered hypodermically. Five of them are now supplied and are obtainable from any druggist. They may be briefly described as follows:

Mixed Infection Phylacogen: Indicated in the treatment of all infections, acute or chronic, in which it is not known what particular micro-organism, if any, predominates—notably in surgical infections, abscesses, puerperal sepsis, eczema, fistulae, etc.

Rheumatism Phylacogen: Indicated in the treatment of any acute or chronic infection caused by the streptococcus rheumaticus.

Erysipelas Phylacogen: Indicated in the treatment of erysipelas—i. e., the acute disease caused by infection with the streptococcus erysipellatis.

Gonorrhea Phylacogen: Indicated in the treatment of any pathological condition due to infection with the micrococcus gonorrhoeae.


Pneumonia Phylacogen: Indicated in the treatment of pneumonia or any pathological condition caused by the pneumococcus.

Complete literature on the Phylacogens has been issued by Parke, Davis & Co. and may be obtained from the company's home offices in Detroit, Michigan. Physicians are advised to avail themselves of this opportunity.

of some of these patients which has marked effect on the vagus and reproduces the symptoms described in animal experiments. He thinks they have succeeded in isolating a bacterium of the paratyphus group but differing from the known forms. The production of poisons is different in different culture mediums, but the experiments are not yet sufficient for exact details. Another symptom accompanying the picture is slight subfebrile temperature variation, which may cause suspicion of latent tuberculosis but which disappears when the intestine is regulated. The treatments have varied with the varying diagnosis. Usually the first diagnosis is simple neurasthenia or rheumatic trouble, frequently there has been confusion with myalgia, neuralgia, arthritis and uric acid troubles, and treatment has varied accordingly, but regulation of the bowels is the necessity. Each case must be studied by itself, and Von Noorden prefers dietetic management to the use of laxatives, etc. Usually two or three weeks are sufficient to indicate the line of treatment to be adopted.

MALIGNANT RENAL TUMORS.

W. F. BRAASCH, Rochester, Minn. (*Journal A. M. A.*, January 25), reports the experience of the St. Mary's Hospital clinic in operating on eighty-three malignant tumors of the kidney up to July 1, 1912. The most important symptom in these cases is probably hematuria, which was observed in 64 per cent., as a primary symptom in 36 per cent. and as the only symptom in 10 per cent. In forty-one cases, or 77 per cent., it was noted more than a year before the patients presented themselves for operation and gross blood was found in the urine at the time of examination in thirty-three, or 40 per cent. of the cases. As observed by the patient himself, the symptom may be of doubtful value and possibly due to some passing condition, or it may have been neglected and forgotten. The presence of tumor may be of uncertain diagnostic value, tumors of surrounding organs may simulate kidney tumors and vice versa, and palpation may be uncertain on account of the position of the kidney, or the tumor or in fat individuals. Large kidneys may simulate tumor. Pain is due to pressure on nerves or to increased kidney tension and may be misleading, simulating gall-bladder disease or lumbago. Pus may occur in the urine, but it is usually due to secondary infection, but it may be so marked as to suggest pyonephrosis. Evidence of circulatory disturbance is commonly found with the so-called hypernephroma or mesothelioma. It is so frequent as to indicate a vasomotor dilating effect due to the toxins absorbed from the tumor. Dilated superficial veins of the face and recently appearing varicocele are suggestive. Braasch goes at length into the different diagnoses. The conditions most easily confused are (1) "essential" and nephritic hematuria, (2) retroperitoneal tumor, (3) bilateral cystic kidney, (4) closed pyonephrosis. Other aids to diagnosis are a dry cough of recent origin, the cystoscopic inspection, urethral catheterization, estimation of renal function and pyelography. The latter should not be employed unless other means fail. Among the eighty-three patients operated on for malignant tumor, the surrounding tissues were so involved as to render nephrectomy impossible in twenty-two,



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and the clinical records also show twenty-one other patients who were considered inoperable, though the diagnosis was considered reasonably certain. Of the sixty-one who underwent nephrectomy seven died in the hospital; of fifty-one remaining patients that could be traced seventeen were alive more than one year, twelve after three years, four after five or more years, and one after eight years. Of the twenty-seven reported dead nine died within a year after operation, two lived one year, four lived two years and four lived three, four and five years, respectively, after operation. These results compare favorably with other malignant abdominal growths. In conclusion Braasch says: "I wish to emphasize the importance of immediately ascertaining the source of every hematuria. Of the fifty-three patients operated on for malignant renal tumor who had a definite history of hematuria, but eighteen, or 34 per cent., had been advised to be examined for its source. Hematuria, particularly when so well marked as to color the urine, is always to be considered a sign of some grave condition in the urinary tract. In fact, it would be conservative to regard every case of hematuria as the result of a malignant process until it can be definitely proved to be otherwise. Renal tumor may lie dormant or grow insidiously over a period of years and by the time that hematuria, tumor or pain calls attention to its existence, it should receive immediate surgical attention."

MALAR BONE FRACTURE.

J. G. R. MANWARING, Flint, Mich. (*Journal A. M. A.*, January 25), describes his method of replacing the depressed, fractured malar bone. For elevating he uses the ordinary cow-horn forceps of the dentist, which, in addition to sure control, has the advantage of leaving no scars, is quickly used and does not require any opening in the mouth. "The skin over the bone is suitably prepared; one point of the forceps is placed over the orbital ridge and the other just under the margin of the body of the bone at its outer side; a little pressure penetrates the skin and the points grasp the depressed bone with any degree of firmness advisable. Now the more or less impacted bone is disengaged from its bed, elevated to its proper place and the forceps removed at once. No dressing is necessary, as the holes in the skin are mere pricks." The method is illustrated.

RENAL HEMATURIA.

A. RANDALL, Philadelphia, (*Journal A. M. A.*, January 4), calls attention to the part played by the congestion of the kidney and its importance as a factor in the causation of unilateral hematuria. Leaving out cases in which the symptom is associated with tuberculosis, calculus, neoplasm or infarct, there is a large class of cases of obscure pathology, the so-called essential hematuria. In these, he thinks, congestion acts as the *primum movens*, an extensive lesion plus a resulting intrinsic congestion causing the bleeding. The congestion if persistent may result in a definite kidney lesion. He reviews the theories that have been offered—that of chronic nephritis, the hemophilia theory and that of angioneurosis—none of which, he thinks, explains the pathologic condition of the kidney which allows the passage of blood unilaterally into the urine and which represents the only symptom calling for relief. The

surgical pathologic condition that is accessible to surgical intervention is a congestion of the kidney. He enumerates the extrinsic conditions giving rise to hematuria, obstruction to urinary outflow or to blood-supply and cardiac and hepatic lesions and the renal varix of Fenwick, of which congestion must play the primary pathologic rôle. For the diagnosis of these cases a thorough study of the history of the case and a thorough physical examination of the whole system would be the first thing, including an x-ray plate of the entire urinary tract as well as ophthalmoscopic examination. The cystoscope should show what side is bleeding, and when this is determined then ureteral catheterization should follow, specimens being taken from the first and second portions of the ureter and the renal pelvis. The phenolsulphonethalein test should then be used and then a collargol injection of the renal pelvis and an x-ray plate of the bleeding side should be made to exclude hydronephrosis or a kink of the ureter. Finally, pelvic lavage with epinephrin may be given. If this does not lead to a diagnosis and hematuria persists exploratory nephrotomy should be used, exposing the kidney with as little handling as possible. This is often curative as pointed out by Brödel in his classic study of renal blood-vessels. Randall says: "In concluding I would leave the subject as follows: In a majority of cases nephritis with its concomitant congestion plays the leading rôle. In the second group the bleeding is from varicosities in the pelvis secondary to congestion resulting from some of the extrinsic conditions above enumerated. And in a third group the hemorrhage is due to either rupture of a vessel or diapedesis of red blood-vessels, again secondary to congestion caused by some one of the above-mentioned extrinsic possibilities. While from the point of view of the patient who desires to be rid of this constant drain on the system, and from the point of view of the surgeon who is consulted, whatever the ultimate pathologic condition is (and it may be one of a large category), we are to consider that the actual etiologic factor causing the hematuria is a renal congestion, and that this is most surely and successfully relieved by the performance of a nephrotomy."

KIDNEY RESECTION.

J. H. CUNNINGHAM, Boston, (*Journal A. M. A.*, January 4), gives an experimental investigation on rabbits to ascertain the influence of operative measures on the function of the kidney. The suggestion for the study was given by the temporary anuria observed in a woman with single kidney who had been operated on for renal calculus. It was necessary to extirpate one kidney in the rabbits, taking the measurements of the other so as to later determine its compensatory enlargement and noting the time in which the rabbit's remaining kidney voided urine. The remaining kidney was subsequently operated on, first after measuring, and a small portion of the kidney substance, from its greater convexity to the pelvis, was resected. The wound was closed in a certain number of rabbits with mattress sutures and the time passed before voiding urine noted. Drainage was established in a certain number of rabbits with a rubber tube and in others with gauze, the kidney wound being not entirely closed and the time noted when the kidney secretion was again established. It became evident from these experiments that the operation of kidney resection on a healthy rabbit with only one kidney, though that is healthy and

has undergone its maximum vicarious enlargement, does temporarily diminish the function of the organ, as shown by the fact that urine secretion ceases for many hours. In the rabbits in which drainage was used and the wound not closed the secretion was re-established much earlier. The escape of fluid was rather freer with rubber-tube drainage than with gauze. Cunningham does not offer explanation of the facts. In splitting the kidney the blood tension must be disturbed and it would seem that the tension should be greater when the wound was closed than when it was drained. Accepting the idea that kidney secretion depends on its blood tension as correct, there should have been a freer secretion when closed by suture than when drained, which is not in accordance with the results in these experiments. The possibility that the nervous system controls the secretory process and that this was more disturbed in the closed wound cases is suggested. Further investigations are promised on the kidney secretion in changes in blood-pressure and if possible with the elimination of the nerve influence.

HYDRONEPHROSIS.

Hydronephrosis, as defined by Hugh Cabot, Boston, (*Journal A. M. A.*, January 4), includes all cases where a dilatation of the renal pelvis due to obstruction exists. It is this class of cases, not the advanced ones calling for nephrectomy, that he considers in his paper. The chief causes of obstruction, in his opinion, are two: mobility of the kidney without corresponding mobility of the ureter, and abnormalities of the renal vessels running to the lower pole of the kidney which are found in 2 to 4 per cent. of cases. While some abnormality of the renal arteries has been shown to exist in about 25 per cent. as has been pointed out by Kelly, they should be regarded as potential cases, becoming active only when the mobility of the kidney causes them to cut sharply across the pelvis. It is impossible, with present data, to say just how often this factor comes in play, but it is not an infrequent one. The symptoms in these early cases may suggest lithiasis, with or without abnormality of the urine, and, in rather rare cases, acute infection, but with persistently sterile urine. Such cases may be extremely puzzling, and one of this kind is reported by Cabot. Diagnosis must be based first on convincing evidence of obstruction. Though this may be slight, the other possible causes of the symptoms must be excluded. Nothing of importance can be learned without the use of the cystoscope and ureteral catheter. The former alone is of little use, and ureteral catheterization will allow a positive diagnosis only after considerable dilatation has occurred. X-ray is of value only on the negative side. Pyelography, as originated by Voelcker of Heidelberg and developed by Braasch of Rochester, Minn., is the mainstay of diagnosis. In this the important point, it seems to Cabot, is the question of the relation of the pelvis to its outlet. The ureter should leave the pelvis at its lowest point and not too abruptly. Slight change of contour alone is not very significant unless it can be shown to be due to abnormality of the outlet sufficient to cause dilatation. Capacity of the pelvis need not be taken into account as an indication for operation. "The indication lies in the proof that obstruction of intermittent character exists to the outflow of urine from the pelvis, and that this obstruction is the cause of symptoms which are not caused by some other coexisting condition. Mere mobility of the kidney is wholly unimportant.

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In many of the cases, particularly those occurring on the left side and in strong muscular men, no mobility of the kidney can be demonstrated by ordinary methods. Convincing evidence can only be obtained by the radiogram taken after injection, the reproduction of the symptoms by the distention of the renal pelvis and the exclusion of the other conditions which could cause the symptoms, chiefly, renal infections, renal calculus and gall-stones." A number of cases illustrative of these conditions is reported. The article is illustrated.

CHANCER AFTER SALVARSAN.

M. ROSENTHAL, Baltimore, (*Journal A. M. A.*, December 21), reports a case of chancre making its appearance after an intravenous injection of salvarsan in an old case of syphilis. The Wassermann test had been negative for years, but symptoms of locomotor ataxia had appeared. The examination of the serum from the sore showed undoubted spirochetes and the Wassermann was positive. The case is reported on account of its unusual features—the development of a chancre four days after an intravenous injection of salvarsan and that a man suffering from the effects of syphilis should contract the disease again in the usual way.

UMBILICAL HERNIA.

J. W. KENNEDY, Philadelphia (*Journal A. M. A.*, December 21), pleads for earlier recognition and surgical interference in umbilical hernia. It is a common condition and in many cases unfavorable for prolonged operation; hence his plea for prophylactic surgery. On account of its gradual onset extensive involvement of the viscera has usually occurred before the necessity of operation has been recognized. He rarely sees a patient before fecal vomiting has taken place, and then it is often too late to save him. Only a few can be saved after too long delayed operation and the mortality is high even when there is slight or no strangulation. Kennedy disagrees with the physician who, after advising surgery for some condition, thinks he has relieved his conscience and goes on with the medical treatment. Kennedy thinks it is professionally criminal for the physician to continue to treat the patient on lines of which he cannot approve. His attention should end when his advice is not taken. If every one did this it is easy to see how much earlier the danger would be met. The successful treatment must practically be prophylactic; that is, it should be not only before strangulation but before the hernia becomes of extensive proportions.

IODIN AND MERCURY DERMATITIS.

S. R. KARPELES, Washington, D. C., (*Journal A. M. A.*, December 21), cautions against the combined use of iodine and mercuric chlorid for disinfection of the skin and reports a case of very severe dermatitis produced by this combination, the tincture of iodine having been first employed and followed by the sublimate solution. The red iodide of mercury is produced which, according to Wood, is a powerful local irritant, as this case would seem to show.

INFANT MORTALITY.

Jacobi believes that "every case of death from lack of breast milk should cause a trial for homicide against a doctor or midwife or mother." To the prevailing notion that many women cannot nurse their offspring, he answers that "one hundred per cent. of our women can be made to nurse, even the fashion of flower of the land." The great fact to be borne in mind in considering this matter of infant feeding is that *the maternal milk protects the nursing against disease*. This fact throws upon those who advocate artificial feeding, which affords no such protection, the responsibility for the infant's death where the maternal milk would have prevented it. The profession as a whole must realize its moral responsibility and use its powerful influence to prevent wanton sacrifice. How does milk acquire its protective virtues? Because of the state of overactivity of the ductless glands, particularly the thyroid and adrenals, in the maternal organisms, and the direct participation of their internal secretions in all immunizing functions. In French cities the death rate among breast fed foundlings is from thirty-two to thirty-five per cent. Among artificially fed infants of the same class it is from fifty to eighty per cent. Three decades ago the mortality among foundlings in New York City was 100 per cent. until wetnurses were provided. Jacobi points out that during the siege of Paris, while the general mortality was doubled, that of infants was lowered twenty-six per cent. because mothers, through the lack of cow's milk, were driven to nurse their babies. During our famine of 1860, in the cotton district, the mortality among infants was reduced one-half, because the deficiency of food forced all the mothers to nurse their babies. Other facts are as follows: Intestinal disease killed 7.09 per cent. of breast fed infants in Berlin during 1895 and 1896, while those artificially fed gave a mortality of 38.6 per cent., other diseases showing an equally suggestive ratio; bronchitis and pneumonia from 5.6 to 39.6 for example. Infants below one year are but slightly susceptible to certain infections. Ehrlich and Brieger demonstrated in 1892 that certain toxic substances, ricin, abrin, and tetanus toxine, injected into mice, endowed the milk of these animals with the power of protecting the offspring of other (unprotected) mice against the action of these poisons. In 1896, Schmid and Pflanz, hav-

(Continued on page xx.)

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TABLE OF CONTENTS

ORIGINAL ARTICLES:—

The Problem of the Prevention of Measles and Whooping Cough,
By C. S. Caverly, M. D..... 53

Report of Death from Internal Hemorrhage with Unusual Findings at Autopsy,
By L. H. Gillette, M. D..... 59

The Role of Insects in the Spread of Infectious Diseases,
By E. H. Buttles, M. D..... 60

Report of Two Cases of Intestinal Obstruction and a Few Points in Regard to Diagnosis,
By M. R. Crain, M. D..... 63

Notes on Homosexuality: An Attempt at Seduction; an Example of Acquired Homosexuality in Prison; a Commentary on the Prevalence of Inversion in Germany,
By Douglas C. McMurtrie..... 66

EDITORIAL 69

NEWS ITEMS 72

AN EPITOME OF CURRENT MEDICAL LITERATURE... 76

THERAPEUTIC NOTES xii

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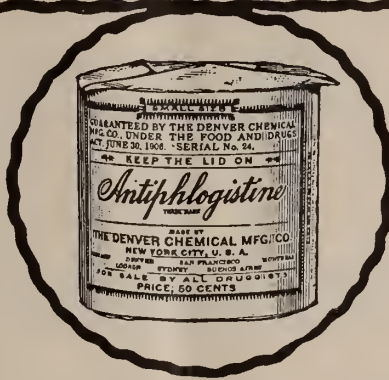
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BREAD AS A VEHICLE FOR CONVEYING DIPH- THERIA.

At a recent meeting of the Académie de médecine of Paris, Dr. René Moreau, health physician at Sens, reported a small epidemic of diphtheria traced to a common source, a baker who transmitted the infection along with his bread sometimes to persons whom he did not see. This epidemic attacked eleven persons and caused four deaths. It was not restricted to a single commune but extended to three at a distance of from $2\frac{2}{5}$ to $3\frac{3}{4}$ miles. The spread was all the more surprising since diphtheria is not frequent in either of the three communes and has not been mentioned since 1905. Although several bakers furnished bread throughout the affected districts, all the patients without exception were patrons of the same baker, whose wife and son were the first attacked. The woman had contracted diphtheria when on a trip to a district where there were at the time several cases of the disease. After the bread was taken from the oven it was placed for a time in the bakery which connected with the sleeping-room of the baker's wife and son. Disinfection of the bakehouse and the house of the patients put a stop to the epidemic. Although this manner of spreading disease may be rare, says *The Journal of the American Medi-*

cal Association, it is worthy of consideration when an epidemic springs up among persons who have no apparent mutual relations and when no other cause can be discovered.

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ORIGINAL ARTICLES.

THE PROBLEM OF THE PREVENTION OF MEASLES AND WHOOPING COUGH.*

BY

DR. C. S. CAVERLY,

President of Vermont State Board of Health,
Rutland, Vt.

The diseases, measles and whooping cough, have long enjoyed a certain vogue—have been seriously regarded as necessary evils, or lightly regarded as a joke. A few years ago it would have created a surprise among the good sisters of both sexes, if they had been assured that this was wrong: that these diseases really caused death and permanent disabilities or that they could be prevented.

Measles and whooping cough were classed with teething and worms. They belonged to well ordered childhood. They had the advantage of some of the other orthodox disorders of that age, in that the child did not usually have either but once, and the fond parent or doting grand-parent could usually exercise some choice as to *when* that should be.

So when the weather was warm, or the moon right, or the disease was having a "light run," the child was sent to call on the playmate, who was sick.

Not only were measles and whooping cough not excluded from the public schools, but from opinions commonly expressed, one would judge that they both belonged in the curriculum. They belonged to the child's education as much as the "Three R's."

It is not uncommon, I believe, today to hear such sentiments as these expressed: "Every one will sooner or later have these diseases; the earlier had, the lighter the disease." So every child is entitled to have them while under the parental roof. I have even heard this from members of our profession. Our first inquiry to-night will be: *Are* these diseases to be lightly regarded? Are they less severe or fatal

in early life? In this connection I shall have to resort to figures.

You have all received, during the past week, a circular letter from the State Board of Health, which shows the relative average death rate in Vermont, from these two diseases, during two five-year periods, viz., 1897-1901 and 1907-1911, ten years apart, and you have noticed that a comparison of the figures for these two periods shows that the deaths from both measles and whooping cough are steadily increasing; that the latter has increased during this ten-year period almost 50%.

This increase in fatalities means an increase in cases, for the mortality is probably not greater than formerly.

Vermont is not exceptional in this respect.

Both these diseases are reportable under our Regulations in Vermont, and measles is reportable pretty generally. The reports received of cases are probably not complete, but may be considered sufficiently so for some comparisons.

According to figures given in the last annual report (1911) of the Massachusetts State Board of Health, there were reported in that state during the five-year period, 1894-1898, inclusive 30,536 cases of measles; and during the five-year period 1907-1911, 78,178 cases. Here was an increase of some 150% in thirteen years. Possibly the Massachusetts cases are being more closely reported than formerly, but it is reasonable to infer that measles is increasing in prevalence in that state. Massachusetts does not have reports of whooping cough.

The Mortality Tables, published by the Census Bureau, giving the causes of death in the Registration Area of the United States furnish these figures:

No. of deaths from measles, 1905-1909	
inclusive	21,341
No. of deaths from whooping cough,	
1905-1909 inclusive	24,623

The above figures are probably as accurate as any that can be given in the country; they furnish food for thought; 9,000 deaths a year, and at least a half million cases of sickness from these so-called "harmless children's diseases," in the Registration Area of this country—multiply

*Read before the Burlington and Chittenden County Clinical Society.

these figures by two—and we have the approximate figures for the whole country.

Our preconceived notions of "harmlessness" receive a jolt with these figures before us. In the gross then, measles and whooping cough cause a vast deal of trouble in the world, and no inconsiderable number of deaths.

Comparing the number of reported cases of either of these diseases with the number of deaths, gives us, of course, a rather small case-mortality. Indeed by the case-mortality these diseases may be either quite harmless or very fatal.

The reported case-mortality from measles in Massachusetts, as given in the reports of the State Board of Health, is only a trifle over 1%.

For the twenty years 1891-1911, the exact figures were 1.4%. These figures, it must be remembered, come from a state of large cities and small rural communities whose population is variously employed, and is living under conditions both good and bad: they are from a state, too, which furnishes probably as accurate statistics of this sort as any in the country.

The corresponding figures for Vermont show that the mortality from measles here, during the last six years for which we have reports, was 0.9%. The Vermont figures for whooping cough during this same period has a case-mortality of 2.2%.

If we were to take these official figures for case-mortality as authoritative and final, measles and whooping cough would only be comparable to smallpox as a destroyer of human life, both insignificant. These figures, however, in the light of text-book authorities are too low.

Holt in "Diseases of Infancy and Childhood," says: "The average mortality from measles is from 4 to 6%, but in epidemics observed in institutions containing only young children, it is much higher."

Without quoting at length, Holt concludes that the death rate from measles may be anything from 1 to 50%. His conclusions are based on figures from various European countries as well as our own. He states that the mortality from whooping cough may be almost as variable, running as high as 50% in institutions, and among those under two years.

We have no way of forecasting how serious or fatal a given epidemic or a given case may be. In the gross, they reap a large annual

harvest, in lives lost, while the discomfort and suffering caused is hardly to be measured.

Along with the time-honored and moss-grown theory that these diseases are inevitable, is the other theory that the earlier they are had, the better.

The Mortality Tables of the Census Bureau throw some light on the mortality rates from these diseases by age-periods. During the five-year period, 1905-1909, the deaths in the Registration Area were as follows:

	Measles	Whooping Cough
Under five years	18,042	23,655
5 to 9 years	1,743	785
10 to 19 years	660	103
20 to 29 years	350	26
30 to 39 years	248	12

After 40, the deaths dwindle to small figures. The case-mortality for age periods may not be as great among the young as the above figures would tend to show, for the number of cases is undoubtedly larger; but that there is actually a greater mortality, especially under ten years of age, is quite certain.

Holt further says with reference to whooping cough, "During the first year of life it (the mortality) is probably not far from 25%, although it diminishes rapidly after this time."

The real seriousness of these diseases, is furthermore, not wholly measured by the deaths they directly cause. Other chronic disabilities follow both, at times, that are permanently disabling. This is especially true as to tuberculosis. To quote Holt once more:

"As a predisposing cause of tuberculosis, pertussis is second only to measles."

These diseases then are no joke: Are they necessary evils?

They are fairly comparable to scarlet fever. We know just as much or little about measles and whooping cough as we know about that disease. The only difference between them seems to be the attitude of the public (shared somewhat by the medical profession) towards these diseases. Scarlet fever is popularly regarded as a serious disease—one that may kill outright or cause disabilities of a permanent nature. In this condition of the public mind, effective preventive measures (quarantine and disinfection) are possible with this disease.

The indifference or contempt with which the public regard measles and whooping cough

render such preventive measures against them impossible. And yet, scarlet fever, as a cause of death in Vermont, is fast disappearing; as a factor in the mortality tables of the country at large, it is overshadowed by both measles and whooping cough.

The circular letter spoken of shows that while scarlet fever averaged to cause only 8.2 deaths a year during the five-year period 1907-1911, measles caused 29.6 and whooping cough 40.2. Is it not time that our profession took notice of these "harmless children's diseases?" One causes three and one-half and the other five times as many deaths as scarlet fever in our state.

In the country at large (Registration Area) during the last five years for which figures are at hand, there were 45,964 deaths from measles and whooping cough and 21,178 deaths from scarlet fever. Measles and whooping cough are as preventable as scarlet fever. The same weapons are in our hands against all these diseases, viz., reporting, quarantine and terminal disinfection. Homely, perhaps bungling, weapons, but when properly used, they accomplish our object. Rigidly used, they have steadily reduced the prevalence and gross mortality from scarlet fever—yes, the case-mortality too, for these measures *do* in time evolve a milder disease.

Scarlet fever has enjoyed popular respect. It has not been known as a "harmless children's disease." Parents have not invited it or considered it inevitable.

In view of the situation, which I have endeavored to state fairly with reference to these two infections, what are we going to do about it? What may the public properly expect us to do? I am aware of the difficulties which surround any suggestion that is practical for solving the problem here presented. Measles and whooping cough are strongly entrenched foes. They are "simple children's diseases" and have been so long lightly regarded, that they are viewed with tolerance by everyone.

"When often seen, familiar with its face,

We first excuse, then pity, then embrace."

Thus Pope describes vice: so of any evil long tolerated.

Our profession has become accustomed to leading into new channels of thought, as regards the prevention of disease. The comparison I have drawn between measles and whooping cough and scarlet fever seems to me to

warrant an attempt on our part to do at least as much in staying the devastation wrought by the two former as has been done in staying the ravages of the latter. Practical experience in preventing the latter ought to warrant some effort in the same direction with respect to the others.

I don't believe that the increasing intelligence of the Twentieth Century civilization in matters of sanitary importance will much longer tolerate the old-fashioned notions that have so long obtained with regard to these two diseases. A people that are waging such incessant, intelligent and successful campaign against infectious diseases in general, will not long tolerate a constantly increasing death rate from measles and whooping cough. Yellow fever, malaria, scarlet fever, diphtheria, cholera, bubonic plague and typhoid fever are steadily and surely being eliminated from our mortality tables. There is surely no better reason for allowing measles and whooping cough to increase in fatalities than there is for allowing the same thing to happen with scarlet fever.

The practical solution of this problem, I believe involves three distinct lines of work:

First, popular education.

The facts I have presented to you and more like them must be placed in the hands of the public. The public is showing more and more interest, and a very intelligent interest in things sanitary. The great object lessons in sanitation, which the world has seen in recent years have not been wasted as educational forces.

The people must be shown that measles and whooping cough are not "harmless" diseases and that they are preventable. They will then *be* prevented.

Second: We must find some way of diagnosing these diseases earlier. We must find the causes. Here is where we are lame. It is not altogether creditable to the profession, that we have not yet been able to learn more about the causes of these two common infections. It must, however, be said that much scientific work has been done and is still being done to discover the causes of measles and whooping cough.

You are probably more or less familiar with the work that has been done at the Hygienic Laboratory by Dr. Anderson and his assistants with infectious organisms and serums. One of his most recent reports deals with the susceptibility of the monkey to the measles infection. I

may quote from Dr. Anderson's paper read at Atlantic City in June in regard to this particular phase of his work:

"In the past year, studies were made on measles, as a result of which we have our first definite knowledge as to the susceptibility of the monkey to infection with measles. It was shown that the virus of the disease is present in the blood at least some hours before the eruption appears and for about thirty-six hours after. The behavior of the virus to various physical and other influences was tested. Experiments made to determine whether the scales were infectious justified the opinion that the desquamating epidermis in measles did not of itself carry the virus of the disease. It was conclusively demonstrated that the infective agent of measles was contained in the nasal and buccal secretions during at least the first forty-eight hours of the eruptive period; and in no instance were the secretions, collected at a later period, found to be infective.

Based on this work, it will probably be possible for the quarantine in measles to be reduced from the usual period of twenty-one days to not more than fourteen days, and this one fact is of such evident practical importance that even the lay members of health organizations can appreciate its value.

The importance of studies on measles is forcibly shown by the fact that, according to the census reports for 1910, measles stood next to diphtheria among the infectious diseases as a cause of death among children."

Doctors Lucas and Prizer of Boston have since published an Experimental Study of Measles in the monkey and their conclusions corroborate the statements of Dr. Anderson and even go further. They say:

"We conclude from these experiments:

1st. That measles can be experimentally reproduced in *Macacus rhesus* and that so reproduced it is a disease of definite incubation period.

2nd. That besides the fever, conjunctivitis, rhinitis, and skin eruptions described by Anderson and Goldberger, it is characterized by Koplik spots (to which we believe we are the first to call attention in the monkey) and by a typical blood picture at least during the pre-eruptive stage.

3rd. That the virus of measles is present in the blood serum at some time exceeding twenty-four hours before the appearance of the

Koplik spots and persists until more than thirty-six hours after the appearance of the skin eruption.

4th. That during the pre-eruptive stage of the disease there is a leucopenia involving the polymorphonuclear neutrophils, the lymphocytes, and the large mononuclear leucocytes. This leucopenia develops in from five to ten days after inoculation and may be preceded by a transient lymphocytic and large mononuclear leucocytosis, which is probably lacking or only poorly developed in the severe form of the reaction, but is strongly developed in less severe cases."

From these published reports, it is possible to say with some scientific definiteness, what we have long known clinically, that measles is infectious prior to the appearance of the eruption and even to the appearance of Koplik's spots, as stated by Anderson. These experiments rather point to a shortening of the periods of infectivity and hence are of practical importance in shortening to a certain extent the period of quarantine. It has been customary to advise that quarantine for this disease should be continued until all acute catarrhal symptoms had subsided and the desquamation was complete. This has been usually at least three weeks. If seven days can safely be taken from that, it will be of vast practical importance to the public as well as the profession.

The *New York Medical Record* editorially refers in a recent number to experiments made by R. Hecker, in which he found that characteristic changes could be noted in the blood of patients coming down with measles from four to six days before the appearance of Koplik's spots. These changes likewise consist of distinct leucopenia, a relative and absolute lymphopenia, a shifting to the left of Arneth's blood picture and the diminution of the number of eosinophiles. These experiments with measles are a step possibly towards a solution of the baffling problem involved in seeking the cause of this disease and giving us a clue to its early diagnosis. The practical results are not yet valuable.

The cause of whooping cough has come nearer being identified. In 1905 Bordet and Gengou discovered a small bacillus in the exudate from cases of this disease, which seemed to be peculiar to it. Doctors Mallory and Horner of the Boston City Hospital recently published in the *Journal of Medical Research* some experiments upon the bacteriology of this disease, which

seemed to confirm the announced discovery of Bordet and Gengou. The summary of their conclusions is as follows:

"Whooping cough is due to a minute bacillus, which occurs in large numbers between the cilia of the epithelial cells, lining the trachea and bronchi and possibly the nose. The location of the organism is apparently characteristic for the disease. Its action seems to be largely mechanical. It interferes by its presence with the normal movements of the cilia and possibly leads to their destruction.

The mechanical interference with the action of the cilia, and possibly their destruction, prevent the normal removal of secretion. The bacilli and secretion produce a continuous irritation, which results in coughing and usually also in the characteristic spasm, known as whooping.

The bacillus found in the lesions is probably identical with the organism discovered and described by Bordet and Gengou, but this identity remains to be demonstrated by the experimental production of the characteristic lesion in monkeys and puppies."

However interesting, the practical value of the discovery of this organism at the present time is nothing. Dr. Stone tells me that the routine search for this for practitioners is not practicable because of the impossibility in the great majority of cases of distinguishing between this bacillus and the many other organisms that occur in the exudate from these cases. We are therefore reduced at the present time to the old diagnostic landmarks of these two diseases. The cough which is common to both, although in measles somewhat different from that in whooping cough, the coryza, and general catarrhal symptoms, which are all of course much more marked in measles, and Koplik's spots in measles, are the main features of beginning cases of these diseases.

The unfortunate and discouraging part of their prevention lies in this very fact, that we are not able to distinguish between the coryza and cough of measles and whooping cough and that that is due to catarrhal colds, so-called, involving the upper air passages.

A certain amount of optimism, however, is perhaps warranted in view of the research work that is being done in the bacteriology of these two diseases.

The third phase of this subject of the prevention of measles and whooping cough has to do

with the exclusion of these diseases from the public and parochial schools.

A chief reason why measles and whooping cough have been difficult to control is the failure to exclude cases from schools that are so advanced in the incubation stage as to communicate the disease to others. Both of these diseases are communicable to others, before a diagnosis is possible.

A child of course may travel in this condition great distances, and may not only expose all with whom it comes in contact enroute, but he may enter a school in a remote district, where there may have been no measles or whooping cough for years, and expose a whole school room full of non-immune children. In this way the disease is carried from state to state, and from one part of the country to another. Usually the child and its family are entirely innocent of any suspicion that they may be harboring the infection.

There is no doubt that our school houses are the clearing houses or foci where these diseases are distributed in the great majority of cases. If you make a chart, showing by months the relative prevalence of measles and whooping cough in a large city or state, you will find that the line representing the curve of these diseases is lowest on the chart during the long vacation of summer, i. e., during the months of July and August. You will find furthermore that this line begins to creep up in the latter part of September, going higher during the fall months. It mounts up and reaches its highest point during the month of March, after which it begins to decline.

In other words, these diseases are most prevalent and occur with increasing frequency after the children return to school and after the school room doors and windows are closed up on account of cold weather. As the spring weather permits of the opening of doors and windows and admitting clean air to dilute the germ-laden air inside, the disease again begins to decline and drops to its lowest mark during the summer vacation.

There are probably other reasons than the school room reason why these diseases are more prevalent during the winter and spring months. The children at home probably in the great majority of cases are living in over-heated and poorly ventilated quarters, similar to those they occupy during school hours in school. There

can be no doubt but what all infections are spread with greater frequency during the winter and spring months than during the months in which our people live largely in the open.

Making due allowance, however, for these facts, it is still a fact, generally recognized, I think, by those who have given this subject careful consideration, that the school is the chief place where these minor children's diseases are spread. Medical inspection of the schools can do something to eliminate measles and whooping cough. It cannot accomplish by itself very much. The impossibility of making even an approximate diagnosis of these two diseases before they are contagious and dangerous to others is universally recognized by the profession.

In this situation, there is only one rule, so far as I can conceive, the enforcement of which would exclude measles and whooping cough from the schools. That rule would read like this: "No child suffering from *cough* shall be allowed to attend school sessions." Cough is a constant premonitory symptom of both of these diseases. It is so like the cough of "colds" that it seldom creates suspicion. Coughing pupils should not go to school. This is a fair rule for all concerned. It is fair to the child that coughs, inasmuch as it places the child at once in the hands of parents or guardians and throws the responsibility of the outcome of the cough where it belongs.

It is fair to the teacher and other pupils, not only in that it removes a possible source of infection and danger to them, but also because it removes a disturbing element from the school room. A coughing child is not getting the full benefit of school work and is preventing his associates from getting such benefit.

It will not do to modify the coughing rule so as to apply only to schools in communities where these diseases already prevail. It is the *first* case of either that does the damage, and the case may have come from a remote part of the country and quite innocently entered school.

In the present state of our knowledge, there is no precaution, I believe, that can be taken against these diseases, which promises so much as the exclusion of coughing children from schools.

I am aware of the difficulties which surround an enforcement of this rule. I know how common in our rural state coughing children are during winter and spring. It may be objected

that if all coughing children were kept out of school, some of our rural schools in winter would perhaps be sadly depopulated. Possibly, yet I venture the prediction that if the first coughing child is sent home, the number of ordinary "colds" in schools will be materially reduced, and the chorus of coughs, now often heard, entirely prevented. The result will be that fewer schools will be closed altogether by either epidemics of "colds" or epidemics of measles or whooping cough.

The only other school condition that can materially aid in protecting children from these infections is the improvement of the ventilation of our school buildings.

If one were searching for the ideal conditions to propagate and spread the various infections of childhood, and especially those that are given off from mouths and noses, he would shut thirty or forty human beings, at the most susceptible age, in a country school room, for two or three hours at a time to breathe and rebreathe the organically-laden air.

Most of us know something about country school houses. In our own homes, we have been accustomed for four or five months a year to think warmth is the index of comfort. If we can get plenty of warm air, we are not critical of its quality.

It is only in the most recently constructed and improved school buildings, in our state, that any successful ventilation is secured. The accomplishment of these two school improvements may be furthered by efficient medical school inspection.

Medical inspection of schools ought to aid in excluding early cases of these diseases from school and it ought to improve school ventilation.

The regulation management of measles and whooping cough by isolation is only partially effective. Our regulations require reports of *cases* from heads of families and physicians. Many escape notification. The regulations prescribe a modified quarantine, which shuts up the case and forbids non-immune members of the family from going to public places. This regulation is only partially enforceable and if the non-immunes can be kept from school, we are fortunate.

The exclusion of cases, both those actually ill and those in the incubation stage from school, however, are of the greatest importance. Individual exposure in the home, or in the street

or in the shops or cars is not so bad as the wholesale exposure which school conditions offer.

If people will learn that these diseases are real dangers, that they can be largely prevented by these precautions—even as has been done in the case of scarlet fever, these diseases will be reported and may be successfully isolated.

Any suggested solution at present may sound visionary and impractical. At the risk of inviting this criticism, I venture to suggest one involving these details: The education of the public to the real seriousness of these infections; and the exclusion of coughing children from school rooms, which are better ventilated through the agency of Medical School Inspection, until we, as a profession, have found their causes, and learned how to make early and accurate diagnoses. No other preventive measures seem practical.

REPORT OF DEATH FROM INTERNAL HEMORRHAGE WITH UNUSUAL FINDINGS AT AUTOPSY.

BY

L. H. GILLETTE, M. D.

Mr. President:

Gentlemen of the Vermont State Medical Society:

On July 30, 1912, I was called to attend Mrs. ———, a lady sixty-four years of age, occupation housekeeper, family history negative, personal history good; had not consulted a physician for over twenty years, in fact, not since the birth of youngest child. Three days previous to my seeing her she was taken with a sharp, hard pain through right hip; this lasted for the afternoon and was followed by dull heavy pain in limbs, especially below the knees, both limbs being affected, the right one slightly more than the left. No digestive disturbance; no headache or dizziness; bowels sluggish but no marked constipation; kidneys acting freely, examination of urine showing the kidneys to be in good condition. Upon physical examination I found the chest organs intact; liver and other abdominal organs normal. In lower abdomen was a large tumor, firm and symmetrical, smooth surface, filling pelvis and reaching umbilicus. Veins of both limbs enlarged and tortuous with many tender points. Slight edema of ankles. As the symptoms were evidently due to pres-

sure I advised rest in bed for a couple of days and opening of the bowels with salines.

Next saw patient August 4th. Pain and swelling in limbs had subsided and the general condition satisfactory. I advised her to go to Boston for an operation but she objected, saying she had never had symptoms of pelvic trouble before and she did not think it necessary; however, after some persuasion she consented to go in the near future for an examination.

On August 16th I was called hurriedly and found patient in state of profound collapse with symptoms pointing to an internal hemorrhage. Death occurred ten minutes after my arrival.

On August 17th autopsy was performed in the presence of Drs. H. S. Ward and C. W. Locke and Mr. W. H. Angell. Body well nourished and muscular development good; stomach had hour-glass contraction and the organ as a whole was slightly enlarged; liver and gall-bladder normal; small intestine normal, gaseous distention slight. Colon from one and one-half inches above ileo-caecal valve contracted its entire length to size of finger; walls thickened and lumen admitting, with difficulty, a probe one-sixteenth inch in diameter. Mucous membrane thrown into folds so as to give the appearance of filling entire gut. So far as we opened it there were no scars to indicate previous ulceration, nor did there seem to be any malignant infiltration. Kidneys normal; right ureter normal; left ureter dilated to one inch in diameter from pelvis of kidney to point where ureter entered the tumor, a little below the brim of pelvis. Right ovary normal; left ovary cystic and size of an egg. Bladder normal; spleen and pancreas normal. Tumor springs from left broad ligament and is of the multilocular type, holding approximately six quarts of fluid; firmly adherent to small intestine and body of uterus and right ligament. Most of the fluid was drawn from tumor in process of embalming but it still contained about one pint of clotted blood. The inner surface of tumor sac was studded with nodules from one-fourth to one inch in diameter and were of heavy, gritty tissue. The body of uterus was also studded with nodules of the same character. Specimens of tumor wall and gut were sent to State Laboratory for examination but I have not yet received report.

Diagnosis from autopsy: Death due to hemorrhage into cystic cavity from carcinomatous degeneration of cystic tumor.

The point of especial interest to me is the condition of the colon. How could health have been maintained so well with the condition that was present, and what is the pathology and the etiology of such a condition? I have been unable to find anything in my text books that touches this, but I recall reading an article in one of my journals some three or four years ago which described the same condition in the small intestine except, as I remember, there was only the hypertrophy of the mucosa, and no diminution in size of the gut. I have found, while operating, two cases where there was a short section of small gut that was in a similar condition but have not been able to decide on a satisfactory explanation of the condition.

DISCUSSION.

Dr. Stone—Dr. Gillette has asked me to go a little further with the pathology of the case which he reported. The tissues were sent me and a piece of the colon and one of the daughter cysts. That single daughter cyst was a cyst adenoma of the papillary type. It was a growth which has practically the same significance as a carcinoma. The contracted colon didn't show any malignant infiltration and it was contracted. I have seen this portion of the gut contracted like that in several cases, but they have all been cases of violence or sudden death from a gun shot wound or something of that sort. I don't think there was a real thickening of the mucosa in this case, only an apparent thickening due to puckering. Evidently one of the daughter cysts had ruptured into the main cyst, and the hemorrhage occurred that way, producing precisely the same results as though the hemorrhage had been into the abdominal cavity. Dr. Morrison says that he has noticed that ruptures of these papillomatous growths are apt to be followed by fatal collapse, and he infers that there is a decidedly toxic effect to the fluid. I think that he has done or contemplates doing some experimental work along that line.

Dr. Melville—Why is it that some of those cases of papilloma is where the mother cyst and daughter cyst ruptures, and after the case is called inoperative and is closed up without an operation, just why is it that the patient occasionally gets well just as they do after opening them up for tubercular peritonitis?

Dr. Stone—I was not aware that such a result would follow, and I am unable to explain it.

Dr. Melville—I didn't know that it was so until I read J. P. Murphy's clinics. I suppose Murphy is good authority.

Dr. Townshend—Was there a urinary examination?

Dr. Gillette—Yes.

Dr. Townshend—A microscopic examination?

Dr. Gillette—Yes, and no pus.

Question—An examination of the kidney? A. Yes.

Dr. Morrison—My observation at the hospital has been that in a simple cyst of the ovaries the patients recover without any serious complication, but I have noticed that with the multiple cystic tumors, i. e. multiple papillo-cystomas of the ovary with mucoid degeneration, that when they rupture we have a greater mortality of those cases. I am unable to

answer why, but I have got Dr. Buttles of the Laboratory interested and we are trying the injection of these cystic products into guinea pigs, hoping to determine the toxicity and will report later.

Dr. J. B. Wheeler—I can recall two or three cases of multiple cysts with papillomatus degeneration, which ruptured in course of removal, and the operation instead of being followed by the usual happy results resulted in the death of the patient from septicemia within a short time. I don't recall any case where the patient died from the shock of the operation, but within a few days. I can think of two or three cases that have done so. So far as impressions like that can be relied upon I should say there must be something pretty malignant about such cysts.

THE ROLE OF INSECTS IN THE SPREAD OF INFECTIOUS DISEASES.

BY

E. H. BUTTLES, M. D.

The Role of Insects in the Spread of Infectious Diseases is a subject conveniently considered in two general heads according to the method by which such transmission is effected.

I. Diseases in Which Insects Act as Mechanical Carriers.

It is well known that such diseases as typhoid fever, dysentery, cholera, and tuberculosis may be transmitted by the house-fly. These are bacillary diseases in which the infection enters through the alimentary tract, and the living germs are excreted in the feces or other excretions. And it is evident that flies or other insects, feeding upon such excreta, and then lighting upon articles used as human food, may transport and deposit virulent germs. Nor does it seem unreasonable that the insects, ingesting infected material might excrete in their feces disease-producing organisms. And it has been abundantly proven that both these methods of transmission do occur. Bacilli of typhoid, tuberculosis and other infections have been found on the bodies and feet, and in the feces of flies caught in places where infected material was exposed.

It was quite definitely shown that during the Spanish War the fly was responsible for a great many cases of typhoid and for many deaths. The health officer of Jacksonville, Fla., Dr. C. E. Terrey,¹ gives an interesting account of typhoid in that city. Yearly there had been a great deal of the disease with uncertain origin. Water and milk supplies were found not at fault

but there were about the city over 8,000 old-fashioned privies, unscreened and open to flies and it seemed likely that here many cases originated. These were all reconstructed and screened, with the result that the number of cases of typhoid fever fell from 329 in 1910 to 158 in 1911, with still further decrease in 1912. Here seems a strong evidence of the importance of the fly as a disseminator of typhoid. Of course this is an unusual case, and modern sewage systems and the proper disposal of excreta of patients are diminishing the likelihood of such transmission. But added importance is gained from our recently-acquired recognition of the healthy carrier, whose excreta may remain a source of danger for months or years. And doubtless some of the sporadic cases of typhoid, in rural communities especially, are due to the agency of the fly. So with other infections of the gastro-intestinal tract at least. The fly is probably the most frequent offender in this manner, but bed bugs, fleas, roaches and other insects have been accused of carrying around pathogenic organisms.

II. Diseases Spread by Bites of Insects.

There are various diseases of man where this method of transmission is the chief or only one known. Little reference is needed to malaria, a blood infection due to a protozoon, transmitted by the *Anopheles* mosquito, and as far as known by that mosquito only. Yellow fever is carried by another variety of mosquito, the *Stegomyia*. Here the specific organism is unknown but is a filterable virus, which will pass through Chamberland and Berkefeld filters, and is probably of a protozoal nature. Rocky Mountain spotted fever, an important disease in the north-western part of this country owes its perpetuation to a species of tick as intermediary, and no other vehicle of transmission is recognized. The ticks are not strictly to be classed among the insects, but they are closely related, and for our purpose may be considered with the true insects.

Another disease that has been carefully studied of late is typhus fever, which had been considered as almost unknown in this country. But its identity with Brill's Disease, and with the Mexican tabardillo has been shown by Anderson and Goldberger who carried on extensive and careful investigations. They conclude² that the disease is not contagious as this term is generally understood, but that it is spread through

the bite of the body louse, and probably also by the head louse. This disease too, is caused by a filterable virus.

Filariasis, a blood infection with the filarial worms, prevalent in the tropics, is transmitted by a variety of mosquito, the *Culex fatigans*. Sleeping sickness is an infection with the *Trypanosome Gambiense*, a protozoon which is found in the blood. This disease which has been very widespread and universally fatal in Africa, has a variety of the tsetse fly as the only known agent of transmission. Kala-azar, another tropical protozoal infection is credited to the activity of the bed bug, while dengue fever, and the so-called sand fly fever, due to some filterable virus, are transmitted respectively by a mosquito and a sand fly. Relapsing fever, caused by a spirochaeta, named after its discoverer, Obermeier, is supposed to be passed about by the bed bug or the louse.

Bubonic plague differs from others mentioned in being a disease of bacterial origin, which in one form, the pneumonic type, appears to be transmitted directly through droplets and secretions from the respiratory tract. But in the bubonic type, the prevalence of the disease among rats and squirrels and the agency of the flea in carrying infection to man has long been recognized. Recently Manning,³ quoting from the *Journal of Hygiene*, has given the results of experiments on guinea pigs at the Imperial Institute of Experimental Medicine at St. Petersburg, in which the following conclusion was reached: "The results definitely prove that the bed bug transmits plague . . . and is more to be feared than the much dreaded flea of man and animals."

Poliomyelitis is a disease in which the possibility of an insect carrier is strong. For several years much study has been devoted to the epidemiology of this infection without definite conclusions as to its causation. It has been shown by Flexner and others that the disease is produced by a filterable virus, found in brain and spinal cord, body fluids, and nasal and intestinal secretions. Kling, Petterson, and Wernsted, of the Swedish Medical Institute produced the disease in monkeys by intra-peritoneal and intraneural injections of filtered secretions from mouth, nose, pharynx and intestines of individuals having the disease; and furthermore they showed that the virus was present in secretions from healthy persons in contact with the disease.

From their results it seemed probable that infection might be spread directly from person to person, with probably healthy persons as carriers.

At the International Congress of Hygiene and Dermography at Washington, last September, Prof. M. J. Rosenau of Harvard announced that he had experimentally produced the transmission of poliomyelitis to monkeys through the bite of stable flies that had been allowed to bite infected monkeys. This work of Rosenau received confirmation in investigations by Anderson and Frost⁴ who, following similar methods, produced the disease in three monkeys used. Howard and Clark⁵ experimented with the transmission of poliomyelitis by other insects, and found that the domestic fly could carry the virus in an active state for several days on its body, and for several hours within the gastrointestinal tract. As these flies do not bite, their role would be simply that of a mechanical carrier of the virus. Mosquitoes and lice seemed unable to take up the virus, but in one case a bed bug sucked in the virus with the blood from an infected monkey, maintaining it in its own body for a week.

There appears no doubt then that poliomyelitis may be transmitted from the sick to the well by the bite of the stable fly, and perhaps by the bed bug. It remains unproven whether such transmission takes place under natural conditions, but the probability is strongly supported by these experimental results, together with the fact that several investigators of the epidemiology of the disease, from its seasonal occurrence and other reasons, had previously arrived at the conclusion that some insect was probably responsible for the transmission.

*Diseases of Animals.*⁶

Of animal diseases whose spread is due to insects or similar parasites the most important in this country is probably Texas fever, transmitted by the cattle tick. It is interesting to note that young ticks, hatched from eggs of infected ticks can transmit the infection. This disease is caused by a protozoon, and is perhaps identical with diseases known as bovine malaria in Brazil, and as tick fever in Australia. Other diseases caused by similar protozoa, and transmitted by ticks are malignant jaundice, a disease of dogs, in South Africa, Rhodesian red water, a tropical disease of cattle, and gall sickness, affecting cattle in South Africa.

Trypanosomes, another variety of protozoon, similar to the organism of sleeping sickness, cause several diseases of animals as surra and nagana or tsetse fly disease, which affect horses, cattle and other animals. These are transmitted by the bite of a variety of fly. Spirochaetae, resembling the infective agent in relapsing fever and in syphilis, cause various diseases in cattle, sheep, pigs and fowls, and are transmitted by varieties of the tick. These spirochaetae are not definitely placed biologically, being considered as bacteria by some and as protozoa by others.

At least one disease of animals, African horse sickness, caused by a filterable virus, is spread experimentally at least, and probably in nature by mosquitoes, both anopheles and stegomyia. We must then accept as proven the transmission of such bacterial diseases as typhoid, cholera, dysentery, and tuberculosis by flies or other insects acting as mechanical conveyors of infected material. Malaria, yellow fever, dengue, and filariasis are carried about by mosquitoes. The tick is held responsible for the spread of Rocky Mountain spotted fever and for many and various epizootic diseases. Varieties of the tsetse fly transmit sleeping sickness of man, and several trypanosome infections of animals, while bubonic plague is disseminated by the flea and perhaps by the bed bug, which is likewise charged with the transmission of kala-azar and of relapsing fever. Lice are also thought to convey this disease, and they are today regarded as the only means of transmission of typhus fever. The sand fly transmits sand fly fever. Among domestic animals various flies, ticks, and mosquitoes have been found guilty of transmitting infections of widespread occurrence and of greatest economical importance.

We notice that the most common of insect parasites are incriminated and a great variety of diseases spread by their agency. We find bacterial diseases, diseases due to various forms of protozoa, to spirochaetae, many to filterable viruses, and at least one, filariasis, to a metazoan. The recognition of the role of the insect in the spread of most of these diseases is recent, but the findings appear conclusive. From the facts known at present it would seem that the diseases caused by filterable viruses and by protozoa are especially liable to be insect-borne, while infections due to bacteria or metazoa may at times be so transmitted.

The 1912 edition of Jordan's Bacteriology mentions the possible role of flies in transmission of leprosy. Sambon, Lecturer to the London School of Tropical Medicine, strongly advocates the theory that Pellagra is transmitted by a species of sand fly, and while unproven as yet, the theory has gained considerable support. If one were minded to reason from analogy it might appear that many other diseases whose usual method of spread is known, may also at times be conveyed by insects, and that the isolated, unexplained cases of such diseases as smallpox, measles, scarlatina and many others might be so explained. Many of them are due to some filterable virus, and in measles and scarlet fever at least the infectivity of the blood at certain stages of the disease has been shown. Certainly enough has been proven against these insects to render them liable to suspicion in any infection of unexplained origin and to call for the employment of all practicable means for their extermination.

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REPORT OF TWO CASES OF INTESTINAL OBSTRUCTION AND A FEW POINTS IN REGARD TO DIAGNOSIS.*

BY

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The two things of the most importance to the general practitioner in cases of intestinal obstruction are to make an early diagnosis and immediately call a surgeon in consultation, so that an operation may be done as soon as possible. This is the only way we can reduce the appalling death rate we now have following operations for intestinal obstruction.

Moynihan says: "For many of the patients who suffer an acute seizure of abdominal pain a hypodermic injection of morphine is the too-ready refuge of the surgeon. In administering morphine the surgeon is acting with the sanc-

tion of the highest authorities, a sanction which, it has seemed to me, has been too readily given. An eminent authority, in a chapter more beautifully written and more pregnant with harm than almost any other chapter in the recent literature of surgery, has written: 'Morphine is an absolute necessity in acute intestinal obstruction and should be administered with as little delay as possible,' and behind this opinion of one whose word is weighty many of us have been content to shield ourselves. The advice is bad. There is no absolute need to administer morphine—there is no justification for repeating the dose unless means are taken to obtain the opinion of a surgeon, or unless the diagnosis is clear and the practitioner is fully aware of the condition which he is deliberately treating—if, that is to say, morphine is a remedy and not merely a refuge."

I would go farther than Moynihan does; I would say give no morphine unless the shock is so great as to temporarily paralyze the intestines so there is no peristalsis. In those cases one dose of morphine is desirable not only to relieve pain, but to hasten reaction, thus sooner re-establishing peristalsis.

In those cases where the shock is not sufficient to paralyze the intestines I would give no morphine and if you cannot resist the importunities of an anxious family to relieve the patient of his suffering, be a diplomat and give a hypodermic of sterile water to quiet the family while you examine the patient and wash out the stomach.

If you find reversed peristalsis and also find intestinal contents in the stomach you are very sure to have a case of intestinal obstruction, even if the patient has a movement of the bowels as it is very common in ileus to have one or two dejections to empty the bowels below the seat of obstruction.

If you are still in doubt give another sterile hypodermic to quiet the family and in an hour use the stomach tube again and if you then find intestinal contents in the stomach you may be perfectly sure that you have a case of intestinal obstruction and the sooner you get a surgeon the less will be your mortality in cases of ileus.

Moynihan also says: "There are few surgeons who, in a series of twenty or more cases, can show a lower mortality than 50 per cent. Anything over a 10 per cent. mortality (which should be attainable) is the mortality of delay."

*Read at the Annual Meeting of the Vermont State Medical Society, at Montpelier, Oct. 10-11, 1912.

To sum up the essential points in diagnosis of ileus we have first, severe pain, shock, in severe cases temporary paralysis of the intestines followed by reverse peristalsis, vomiting stomach contents and later intestinal contents and there may be one or two dejections, but after that portion of the bowels below the obstruction is emptied there should be no passage of gas or feces.

If these symptoms are present in a given case one should not wait for rapid pulse, slight increase of temperature, an anxious expression of the face and clammy sweat. These are symptoms, not of intestinal obstruction, but of toxemia and a precursor of death.

The report of the following cases shows that in exceptional instances we can have intestinal obstruction a long time and still make recovery, but I hope the report of these exceptional cases will not cause any physician to delay immediately calling a surgeon in cases of ileus.

Case No. 1. Mrs. E. M. B., age 53. Married, never pregnant. Had a first attack of gall-stones in 1908 or 9. Fall of 1910 had typhoid fever. Had been well until she awakened early the morning of July 25th with severe pain in her abdomen, followed by vomiting. Was unable to get a passage from the bowels. Doctor tried to get a movement with cathartic and enema, got some fecal matter because of the injection, but she passed no gas. Was given very little morphine, but she drank large quantities of water and vomited intermittently.

The patient was sent to the hospital by Dr. Carty. I first examined her with Dr. Bellerose, July 28th at 3 p. m. Temperature 98.8; pulse 92; respiration 18. She looked well and skin was normal, but was in pain and vomiting intestinal contents.

We washed out her stomach and got a large quantity of intestinal contents and a little blood that was not very bright. With the history and result of examination, including the finding of blood, and her good condition, it did not seem possible that the bowels could be constricted for such a long time.

My diagnosis was intestinal obstruction from a gall-stone in the ileum. I made a median incision; found the cecum and the ascending colon collapsed; put my hand into the pelvis and found a loop of intestine with a hard substance inside, drew it out of the wound, incised the gut and

took out a large gall-stone, then emptied the intestines by inserting a tube into the gut, gathering the intestines onto it and cleaning them out above the seat of the obstruction. Washed it out with salt solution and closed the incisions in the gut and abdominal wound. The patient made an uneventful recovery with a maximum temperature of 99.2 and highest pulse rate 102.

Case No. 2. F. M., age 20; French Canadian. In 1910 had an operation for appendicitis, also one for stone in right kidney. August 5th, 1912, while working in Pittsford on the Rutland Railroad he fell 15 feet from a scaffold, landed on his feet. Caused pain in his belly; worked rest of day. On the 6th called Dr. E. whose diagnosis was indigestion and stoppage of the bowels from eating green apples and choke cherries. The 7th went to Malone, N. Y. Vomited that night at home.

The 8th Dr. A. G. Wilding of Malone was called. Dr. Wilding says he found the patient suffering severe pain and nausea. When he called the 9th he was vomiting; no let-up of pain. Tried all that day to get a movement of the bowels and failed so decided there was an obstruction of some kind. Sent him to Rutland the 10th on morning train.

I first saw him at the Rutland Hospital, August 10th, 6 p. m. Severe pain, no peristalsis, abdomen distended, tympanitic in upper part, flatness on percussion in hypogastric region. Temperature 100.4, pulse 100. Had two scars from previous operations and had purulent bronchitis.

My diagnosis was rupture of the intestine, probably small, and temporarily closed by adhesions of the omentum; later giving away of adhesions, peritonitis and gathering of pus. Asked my colleague, Dr. Ryan, his diagnosis. He started to say he guessed—I interrupted, telling him not to be guessing, but make his diagnosis. He said it was mechanical intestinal obstruction. We all agreed it was a case for immediate operation.

Opened the abdomen in median line, parietal peritoneum dark purple color, large quantity of bloody peritoneal fluid flowed out, but no pus. There were extensive adhesions, most of them in the region of the old incision through the right rectus. Intestines greatly distended and paralyzed so that I could not excite any peri-

stalsis. The fluid was retained in the lower part of the abdomen by adhesions and the pressure of the inflated intestines.

Could not find the seat of obstruction and the adhesions were so dense and extensive could not feel over in the region of the cecum. Made a second incision to the right of the old scar and found a loop of the small intestine caught between an old fibrous band one inch wide and the anterior wall of the abdomen. The gut was constricted so tightly that I could not force even gas by the constriction. Relieved the stricture, opened the intestine, emptied the contents, broke up what adhesions I thought were doing harm, but left most of those I thought harmless, and closed the intestinal wound and the abdominal incisions.

In the latter part of the night the patient got out of bed and went through the hall into the bath room to urinate. Recovery was delayed because the vitality of the parietal peritoneum was so impaired that we had some breaking down of the incision and had to remove pieces of chromic gut; made a recovery with highest temperature 103 and pulse 138. I think the high temperature and pulse were partly due to the purulent bronchitis which he was suffering from before operation and which seemed to be aggravated by taking ether.

On account of the breaking down of some parts of the incisions we kept him in bed longer than usual to guard against ventral hernia, but he was discharged from the hospital and went to his home in Malone, September 21st, perfectly recovered.

I would advise physicians not only to watch the operations in all their abdominal cases that are operated on, but also to examine all growths or other tissues that are removed and compare the pathological findings with the history. Also improve every opportunity to see abdominal operations and study the living pathology.

If physicians saw more abdominal work they would be more afraid to procrastinate than they would be to call a surgeon in consultation or advise an abdominal operation.

In closing I would say never make a diagnosis of intestinal obstruction from choke cherries or green apples, unless they swallow the apple whole and plug a gut as the gall-stone did in case No. 1. And do not delay calling a surgeon because in these two cases I was so fortunate

as to have a recovery after such a long standing obstruction.

If reporting these two cases and the few remarks I have made on diagnosis should cause any of you to be more alert in the diagnosis of intestinal obstruction and calling a surgeon earlier, I shall be amply repaid for the effort of presenting this short paper to you.

DISCUSSION.

Dr. G. S. Bidwell—I am very much interested in the gall-stone report. I had one case somewhat similar, but before mentioning it I would like to speak of a case of intestinal obstruction due to peculiar condition of inguinal hernia that I had some four years ago in a man seventy-three years old. He sent for me to reduce his hernia. Previously he had reduced it himself. It was the type of indirect inguinal hernia and it was not much of a trick to put it back. All tumor disappeared. He had been vomiting and in considerable pain. He assured me that the pain was relieved. The tumor in the left side disappeared, but I noted when the tumor disappeared there was the absence of the gurgling rattle which one likes to hear when he reduces a hernia. About eight hours after I was notified by telephone that the gentleman was worse. When I arrived he was vomiting, and at that time I was able to make out a mass in the left lower portion of the abdomen. I had used no violence in reducing the hernia. I took him to the Heaton Hospital and Dr. Chandler, Dr. McGuire, and Dr. Lindsay were present, concurred in my diagnosis, and advised operation. A median incision was made, and on retracting the lips of the wound we could plainly see where the gut entered the internal abdominal ring and came back. Probably the gut had been in the internal ring for a long time, and in making the reduction patient had reduced the gut with the internal ring. The obstruction was not so severe but that Dr. Chandler was able to make traction and draw it out of the internal ring with no more trouble.

Another case of obstruction was in a short, stout Irish woman who had raised a family of children and had always been a hard worker, seventy years old. The first time she consulted me was in October, 1909, with pain in her right hypochondrium, distress after meals, bowels always costive. In December, 1910, she complained of digestive pains in the upper abdomen. She had had no medical advice for that. December 31, she came to consult me for pruritus vulvae. The history was that she had fallen on a box and hurt her left side. Her urine contained a moderate amount of sugar, and specific gravity, 1034. Patient put on diet Jan. 9. The urine had only a trace of sugar, sp. gr. 1027. The pruritus had disappeared. On October 13, 1911, she fell again and struck her left side the same as before. I think she had an attack of vertigo. She had been very comfortable all summer. Of late she has been eating freely of forbidden food. Oct. 14, the abdomen was distended and she vomited several times, a large amount of dark liquid of suspicious odor. I suspected mechanical ileus, but advised against any operation on account of diabetes, which had returned because of her indiscreet diet. She had very little pain. At 4:25 in the afternoon, peristaltic sounds were heard. I had given a little mor-

phine for distress. At first she had refused an operation, but after she had had a few attacks of fecal vomiting she concluded she would rather have an operation. Dr. Tinkham came up and the family were advised that the patient probably would not recover and probably the wound would not heal. Ether began at 6:50, the operation began at 7:10, and was all over and the patient in bed at eight o'clock. The quantity of ether used for the entire time was about 90 grams. The patient never vomited or had any complaints to make of any pain. Had no untoward symptoms, her chief complaint was that she did not have enough to eat. On the third day she would move about the bed and turn in bed. Never had a particle of temperature that I observed, although the nurse told me it reached 99° on Oct. 20, at 6 P. M. She died on Oct. 22, October 21, at eleven in the morning a fecal fistula appeared at the abdominal wound. There was no attempt on the part of the wound to heal.

The interesting point is that on opening the abdomen there was some evidence of the fall that the woman had had, and some evidence that there had been a mechanical ileus, if such was the case there was some fibrous matter which had been discarded by our cutting her. The doctor put his hand on the right side of abdomen and said, something feels pretty big down there, and upon examination there was a stone as big as a hen's egg, which filled the intestine so that it was impossible to move it by any reasonable force. The doctor opened the intestine, removed stone, and intestine was closed by three rows of Lembert's suture. Her appendix was removed. If it had not been for the diabetes the woman would have made a recovery, apparently. The stone was so hard that hammer and a stout knife were required to fracture it.

Dr. L. H. Gillette—I operated upon one case of intestinal obstruction caused by a strangulated hernia where fecal vomiting had been present for three days; on opening the abdomen we found the small intestine plum color and quite friable; the patient made an uninterrupted recovery.

I recall some few years ago a case of intestinal obstruction in a boy of fourteen years of age when it was something like twelve days before we got a free action from the bowels, but I think in this case that the obstruction was not complete.

I agree with Dr. Deaver that all acute abdomens should be explored at the end of twenty-four hours unless there are some marked signs of improvement from medical measures within that time. I think that if we would hold to that rule our mortality from intestinal troubles would be reduced to one or two per cent.

Dr. Bidwell—I had a case operated on in which the obstruction, a femoral hernia, had existed from Tuesday to the following Monday without any vomiting, or anything passing the bowels. The gut was gangrenous at the constricting ring and was torn apart during the operation. United by Murphy button. Patient made a good recovery, although convalescence was somewhat prolonged.

NOTES ON HOMOSEXUALITY: AN ATTEMPT AT SEDUCTION; AN EXAMPLE OF ACQUIRED HOMOSEXUALITY IN PRISON; A COMMENTARY ON THE PREVALENCE OF INVERSION IN GERMAN.

BY

DOUGLAS C. McMURTRIE.

I.

There recently came under my observation a homosexual infatuation of a young man 23 years of age for a boy aged 17. The case presents several elements of fairly general interest and may warrant description. I will designate the former as *J* and the latter as *M*.

The subject *J* was abnormal in several ways. Throughout his school life he had been regarded as "queer" by his mates and was certainly mentally defective to a slight degree. He soon developed religious tendencies to such an extent that they became almost an obsession. He attended every church service possible and was anxious to become a missionary from which purpose he was dissuaded only by the emphatic counsels of friends of his family. He also had musical inclinations and devoted much time to efforts to perfect himself on the violin.

At the age of 21 he attended college in a town where *M* had gone to avail himself of tutoring opportunities and soon the two became acquainted. *J* did everything possible to foster their relations but *M* though passive was not impressed and was inclined to be bored. From time to time *J* became affectionate, finally attempting to kiss *M*. When *M* left the town *J* wrote him impassioned love letters, such as a romantic youth might send to his sweetheart. At a later date when opportunity came he invited *M* to visit him and although *M* was indifferent such a visit was arranged.

The circumstances came to my notice through a chance remark by a member of *M*'s family that *J* wrote such remarkable letters. Several details being mentioned I asked questions and elicited the details already given. Through a coincidence I had also know other facts regarding *J*. I thus had fairly complete data. The case being clearly one of infatuation by a sexual invert, *M* being entirely ignorant of his

The too free use of cathartics following a laparotomy frequently does more harm than good.

condition or purposes, I most emphatically advised giving up the visit and the complete breaking off of the acquaintance. This was done.

It is noteworthy, however, that though all the facts were in the possession of M's family, they had no recognition of the situation and its dangers. Ignorance on such matters is very general among the laity and it would seem an urgent duty of physicians to offer advice in similar cases, even though it may not be specifically requested.

II.

There has recently appeared in a book of very limited circulation some evidence bearing on acquired homosexuality that has too much medical interest to pass unnoticed. It, therefore, seems advisable to me to report the circumstances described.

The book in question is entitled "Prison Memoirs of an Anarchist" by Alexander Berkman. The author relates a conversation with another prisoner of high intellectual calibre. After some preliminaries incident to the embarrassment at discussing such a subject, the other prisoner, who is designated as George, speaks as follows:

"But as the months and years passed, my emotions manifested themselves. It was like a psychic awakening. The desire to love something was strong upon me. Once I caught a little mouse in my cell, and tamed it a bit. It would eat out of my hand, and come around at meal times, and by and by it would stay all evening to play with me. I learned to love it. Honestly, Aleck, I cried when it died. And then, for a long time, I felt as if there was a void in my heart. I wanted something to love. It just swept me with a wild craving for affection. Somehow the thought of woman gradually faded from my mind. When I saw my wife, it was just like a dear friend. But I didn't feel toward her sexually. One day, as I was passing in the hall, I noticed a young boy. He had been in only a short time, and he was rosy-cheeked, with a smooth little face and sweet lips—he reminded me of a girl I used to court before I married. After that I frequently surprised myself thinking of the lad. I felt no desire toward him, except just to know him and get friendly. I became acquainted with him, and when he heard I was a medical man, he would often call to

consult me about the stomach trouble he suffered. The doctor here persisted in giving the poor kid salts and physics all the time. Well, Aleck, I could hardly believe it myself, but I grew so fond of the boy, I was miserable when a day passed without my seeing him. I would take big chances to get near him. I was range-man then, and he was assistant on a top pier. We often had opportunities to talk. I got him interested in literature, and advised him what to read, for he didn't know what to do with his time. He had a fine character, that boy, and he was bright and intelligent. At first it was only a liking for him, but it increased all the time, till I couldn't think of any woman. But don't misunderstand me, Aleck; it wasn't that I wanted the 'kid.' I swear to you, the other youths had no attraction for me whatever; but this boy—his name was Floyd—he became so dear to me, why, I used to give him everything I could get. I had a friendly guard, and he'd bring me fruit and things. Sometimes I'd just die to eat it, but I always gave it to Floyd. And, Aleck—you remember when I was down in the dungeon six days? Well, it was for the sake of that boy. He did something, and I took the blame on myself. And the last time—they kept me nine days chained up—I hit a fellow for abusing Floyd: he was small and couldn't defend himself. I did not realize it at the time, Aleck, but I know now that I was simply in love with the boy; wildly, madly in love. It came very gradually. For two years I loved him without the least taint of sex desire. It was the purest affection I ever felt in my life. It was all-absorbing, and I would have sacrificed my life for him if he had asked it. But by degrees the psychic stage began to manifest all the expressions of love between the opposite sexes. I remember the first time he kissed me. It was early in the morning; only the rangemen were out, and I stole up to his cell to give him a delicacy. He put both hands between the bars, and pressed his lips to mine. Aleck, I tell you, never in my life had I experienced such bliss as at that moment. It's five years ago, but it thrills me every time I think of it. It came suddenly; I didn't expect it. It was entirely spontaneous: our eyes met, and it seemed as if something drew us together. He told me he was very fond of me. From then on we became lovers. I used to neglect my work, and risk great danger to get

a chance to kiss and embrace him. I grew terribly jealous, too, though I had no cause. I passed through every phase of a passionate love. With this difference, though—I felt a touch of the old disgust at the thought of actual sex contact. That I didn't do. It seemed to me a desecration of the boy, and of my love for him. But after a while that feeling also wore off, and I desired sexual relation with him. He said he loved me enough to do even that for me, though he had never done it before. He hadn't been in any reformatory,* you know. And yet, somehow I couldn't bring myself to do it; I loved the lad too much for it. Perhaps you will smile, Aleck, but it was real, true love. When Floyd was unexpectedly transferred to the other block, I felt that I would be the happiest man if I could only touch his hand again, or get one more kiss."

III.

Homosexuality is often considered as being especially prevalent in Germany, though this is, without doubt an erroneous view. The reasons which have given rise to this view, however, and the source of the fallacy have been brought out by a recent tilt on this subject between a French and German physician.

In a report to the Seventh Congress on Criminal Anthropology Dr. Etienne Martin refers to homosexuality as being widespread in Germany to a degree not known in France. It seems that he was especially impressed by the psychiatric clinic at Cologne where several inverters were always under observation both by the clinic and by the police.

A reply and explanation is made by Dr. Numa Praetorius, "A propos de l'homosexualité en Allemagne," *Archives d'Anthropologie Criminelle*, Lyon et Paris, 1912, XXVII, p. 114-116. It is pointed out that the key to the rôle played by inversion in Germany is to be found in the famous "Article 175" of the penal code. This article makes criminal all homosexual acts, even if committed by two persons above the age of majority within the privacy of four walls. Arrests are made freely upon a simple denunciation and the police are given the right to pry into intensely private affairs.

Worse still the cases are brought into open court where expert medical examination and

testimony is required. Under the law the police, the public prosecutor and the courts parade homosexuality in full view disclosing inverters who would otherwise remain in seclusion or at least—in other countries such as France—would not be brought to public attention.

By the trials, the scandals and the suicides which are occasioned, much publicity is given to the condition of homosexuality. For this among many other reasons there has been lately a determined effort by intelligent physicians in Germany to secure the repeal of "Article 175" of the penal code.

JAILS VERSUS SCHOOLS.

A recent issue of *Public Health*, the bulletin of the Michigan State Department of Health, contains a striking example of the ridiculous limitations often placed on public health work. The board recently condemned the Ingham County jail because some of the cells were below the ground-level and were not in sanitary condition. The county was compelled to build a new jail that was sanitary. In District 6, Lansing Township, Ingham County, there is a schoolhouse which has a basement room lighted and ventilated by five small windows. In this room were crowded fifty-five small children. The conditions as to light and ventilation were as bad in the school room as in the jail cell. Yet the State Board of Health has no power to order the school board to provide sanitary schoolrooms, nor, apparently, has any other body. These facts are shown on the front page of the bulletin in an impressive cartoon bearing the suggestive question, "If the state can protect criminals, why can't it protect schoolchildren?" Why, indeed, asks *The Journal of the American Medical Association*. It is gratifying to know that the local school board is doing everything in its power to improve the situation. But the fact remains that under the present law in Michigan, all plans for jails are subject to the approval of the State Board of Health, while schoolhouses may be built and are built without any sanitary supervision whatever. Similar conditions are all too common in other states.

*Note the significance of this remark.

Vermont Medical Monthly.

A Journal of Review, Reform and Progress in the Medical Sciences.

H. C. TINKHAM, M. D., }
B. H. STONE, M. D., }*Editors.*

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EDITORIAL.

The study of cancer while productive of much information in regard to prevalence, mode of progress, etc., has so far been barren of any convincing results in regard to its etiology. The controversy has always been between those who believed it to be incited by an extraneous parasite and those who disbelieved this, the latter school urging that the cell itself acts as a parasite and that certain cells once endowed with a mania for reproduction, through some internal abnormality or other, a clear recognition of which has never been attained, keep on in an exaggerated and lawless proliferation at the expense of the normal tissue of the part. The advocates of this view have maintained that experiments in the artificial introduction of cancer have always involved the actual transportation of the cancer cell itself and thus fail entirely to prove an extraneous parasite. The arguments for this view of the case have been so strong that in later years the other idea has nearly been lost sight of. Certain bodies have been described in these cancer cells concerning which much controversy has arisen but it has up to the present been found absolutely impossible to prove that

these bodies were vital rather than degenerative products. With the last two or three years, however, some investigators have described results which have tended to unsettle the crystallized belief in the non-parasital origin of cancer. These have been as follows:

"(1) The announcement by Peyton Rous (Jan. 21, 1911) that a chicken sarcoma is inoculable in the absence of living chicken cells, i. e., with fluid freed from the ground sarcoma by centrifuging, and also by filtration through moderately coarse Berkefeldt bougies. Fine bougies will not serve. Later, in the *Journal of Experimental Medicine*, he furnished what seem ample proofs of this contention. Very recently he has shown that tumor material dried for six months is still infectious. (April 4, 1912, Am. Asso. for Cancer Research).

(2) The discovery by von Dungern that when a round-cell sarcoma of the dog was grafted on the fox, only fox cells grew. (*Muenchner Med. Wochenschrift*, Jan. 30, 1912, p. 238.)

(3) The recent statements by Wassermann, Keyser and Wassermann, that cancer cells of mice (both carcinoma and sarcoma) have a selective affinity for salts of selenium when these are passed into the blood stream in combination with eosine, thus showing that the contents of tumor cells is chemically distinct from that of normal cells. (*Deutsche Med. Wochenschrift*, No. 51, Dec. 21, 1911, p. 2389)."

And now from the Laboratory of Plant Pathology of the United States Bureau of Animal Industry, comes an important contribution in the description of plant disease known as crown gall which throws by analogy a very interesting side-light upon the subject. Bulletin No. 225 from the Bureau of Plant Industry written by Smith, Brown and McCulloch takes up this subject and shows (1) that this disease—Crown Gall—is an actual neoplastic growth belonging to the cate-

gory of true tumors (atypical blastomas). The morphological likeness of this disease to malignant tumors in animals is described in the author's own words as follows:

"(1) A peripheral growth of tumor cells out of pre-existing tumor cells, with absence of any capsule or well-defined limit to growth. The growth is injurious and extraphysiological, and exactly as in human cancer, the cell itself is the only visible parasite.

(2) The existence of a well-developed supporting stroma.

(3) The formation of tumor strands which extend from the primary tumor in various directions.

(4) The development on these tumor strands of secondary tumors which have the structure of the primary tumor even when they are located in other organs.

(5) The existence of giant cells, i. e., cells which contain several nuclei, and of rapidly proliferating anaplastic cells.

(6) The occurrence of many amitotic nuclear divisions and of occasional banormal mitotic divisions, i. e., divisions in which more chromosomes pass to one pole than to the other."

This bulletin is enriched by numerous photographs which show the similarity between this plant disease and human cancer in a most striking manner, but the most startling announcement of the entire contribution is that a parasite belonging to the group of bacteria has with great difficulty been isolated from this plant growth; that these bacteria are found present in every tumor, primary or secondary; that they have been cultivated in artificial media and that the infectious nature of the organism has been proven by hundreds of inoculations and that its ability to produce the disease on other plants than the one from which it has been isolated has been demonstrated by many inoculations. These results were obtained only after two years of

careful investigation with many many failures but finally the author succeeded in separating an organism which they termed bacterium tunerfacien. Subsequent experiment gave a most uniform success in being able to obtain one hundred per cent. of infections but eight years of patient investigation was needed before the organism was satisfactorily stained in tissues so that it could be demonstrated under the microscope. The parasite apparently works to stimulate the cell to rapid growth and reproduction, thus overcoming by actual pressure the resistance of surrounding tissue and forcing its way between the normal cells in the path of least resistance. In Dr. Smith's words, the results between the host and parasite in this disease may be regarded as symbiosis:

"The relation between host and parasite in this disease may be regarded as a symbiosis (or condition in which two dissimilar organisms live together). The bacterium derives its food from the cells of the host and drives them at a break-neck speed. It gives to them in return its waste carbon dioxide for the use of their chloroplasts." (Chloroplasts are the bodies in the cell which contain chlorophyll or green coloring matter and are the most important bodies concerned in the making of the starch from the water in the cell and the carbon dioxide of the air.) "The bacterium does not destroy the cells of the host, but only stimulates them into an abnormal and often exceedingly rapid division.

This stimulus, it would seem, takes place through the following delicate adjustment of opposing forces: within the host cell the sensitive parasite produces as one of its by-products an acid. As this acid accumulates it stops the growth of the bacteria and destroys a portion of them without, however, destroying the host cell. The membranes of these dead bacteria which have now become permeable, allow the diffusion into the host cell of bacterial endotoxines."

(Endotoxines are poisons produced by the bacteria, but held within them until dead, and only escaping when the membranes of the dead bacteria disintegrate.)

"The host cell now contains of abnormal bacterial products, (a) these escaped endotoxines, (b) a certain amount of weak acid, (acetic), (c) some ammonia and (d) an excess of carbon dioxide. Under the stimulus of one or more of these poisons the nucleus (or point from which proliferation commences) divides by mitosis (the envelope enclosing the nucleus disappears) and the contents of the nucleus flows out into the cell. The dormant bacteria under the stimulus of this nuclear substance renew their activities in the daughter cells until again inhibited whereupon the daughter cells divide. By this rocking balance, in which first the parasite and then the host cell has the advantage, the tumor develops rapidly and independently of the needs of the plant."

The report of this work is bound to stimulate renewed effort in cancer research, and stimulate anew the hope that we are on the verge of some practical discoveries in this line which will give a basis for prophylactic and curative treatment for this greatest of human scourges.

The recently adjourned legislature passed comparatively few public health measures, but that does not mean that the Committee on Public Health was inactive. A great amount of energy was necessary to defeat many pernicious measures which were attempted. One important bill was passed for which much credit should be given the Federation of Women's Clubs. This was a bill requiring the physician to report to the State Board of Health all cases of venereal disease. We are unable to procure the full text of this bill at this time, but this and all public measures passed or amended by

this legislature will be printed in our next issue.

SENIOR CLASS RESOLUTIONS.

The following resolutions, passed by the senior class recently, at a meeting of all its members, expresses its progressive sentiment and is a step in the right direction. Be it

RESOLVED, that the class of 1913 form a permanent organization composed of a president, two vice-presidents, a secretary, a treasurer and an executive committee, consisting of those officers and two other members, all to be chosen with reference to giving equal representation to all colleges of the University, the duties of the executive committee to be to provide for and to conduct class activities after graduation, and be it

RESOLVED, that a nomination board be constituted in the following manner to present nominations for such officers and committee; each fraternity in the University to name one senior member and the non-fraternity men to name two senior members; which board, when chosen, shall report at a meeting of the class to be called for the purpose of acting on such report; and be it

RESOLVED, that the class of 1913 hold reunions at commencement on its first, fifth, tenth, fifteenth and twenty-fifth years, publish directories of the class during its third, seventh, twelfth and seventeenth years, and issue a letter to all members of the class during its second, sixth, eleventh and sixteenth years after graduation, and be it further

RESOLVED, that a per capita tax of one dollar be levied to be paid on or before June first, the proceeds of which shall be set aside to be applied to the expense of conducting such activities after graduation. Be it

RESOLVED, that the class of 1913 elect a "Commencement Arrangements Committee" of three members and that the nominating board present nominations for the same, the duties of this committee to be to cooperate with classes proposing to hold reunions at commencement time, to recommend the adoption of new customs and features of entertainment at commencement, to secure as large an attendance of alumni and undergraduates at commencement as possible, and be it

RESOLVED, that the class urge all alumni to attend the coming commencement, and request that the following classes arrange reunions and joint class functions with this class; 1888, 1893, 1898, 1903, 1908, 1910 and 1912, and that the class of 1913 recommends:

(1) that all classes adopt distinctive costume or insignia to be worn during commencement week,

(2) that undergraduates attend and participate in commencement festivities and

(3) that the University facilitate and encourage the attendance by undergraduates at commencement and promote the acquaintanceship between undergraduates and alumni by every practicable method. Be it

RESOLVED, that the class of 1913 recommends:

(1) that its members adopt the plan of stated yearly contributions to the endowment of the University to be made on Founder's Day of each year and

(2) that the adoption of this plan by other classes and by individual alumni be general, as being in the interest of the University's welfare and conducive to college spirit, and be it

RESOLVED, that the class proceed to the election of one member to serve as class collector whose duty it shall be to receive and turn over to the treasurer of the University such pledges and contributions as are made this year and to act in facilitating the work of class contributions in succeeding years. Be it

RESOLVED, that the class of 1913 recommends that distinction between different colleges of the University in all class and student organizations and activities be hereafter completely eliminated and that members from all departments be urged to participate in such matters on a basis of equal interest and representation. Be it

RESOLVED, that the class of 1913 recommends that the student body develop the practice of singing of college songs on the campus at seasonable times of the year. Be it

RESOLVED, that copies of the resolutions passed at this meeting be printed in the UNIVERSITY CYNIC, the VERMONT MEDICAL MONTHLY and the "U. V. M. NOTES."

The employment of iodine vapor is a novel measure which a French specialist reports of service in cystitis.

NEWS ITEMS.

Dr. C. F. Dunn of Winooski has gone to New York to practice.

Dr. E. A. Smith of Westford has gone to Lincoln to take up the practice of medicine there.

Dr. Petty of Fairfax has taken up Dr. Smith's practice in Westford.

Dr. C. F. Loftis, '11, has opened an office in St. Albans.

Dr. R. L. Maynard has opened an office at 73 Pine Street, Burlington, for the practice of medicine.

Notice is received of the death of Dr. H. L. Townsend of Bridport, Vermont. Dr. Townsend was born in 1847 and had practiced in Bridport for many years.

Married in Boston, Massachusetts, February 25th, 1913, Dr. Alfred A. Fenton, class of 1908, University of Vermont, and Miss Caroline Hatch.

The University of Vermont College of Medicine will hold its annual post-graduate course May 6th to 16th inclusive. The course has been lengthened and elaborated in an effort to make it meet the needs of every general practitioner. It is hoped that this early announcement of the date will enable a large number to make plans to attend. A complete programme will be mailed later.

Dr. Ella Blaylock Atherton of Nashua, N. H., is suffering from a fractured arm caused by cranking her automobile from the right.

Dr. Edward G. Janeway of New York, who died February 10th, 1911, left an estate of \$481,500, mostly in railroad stocks.

Dr. T. W. Luce of Portsmouth, N. H., while cranking his automobile recently broke his arm.

A recent order of the Public Health Service promulgated by Secretary of the Treasury MacVeagh, requires water provided by common carriers on cars or vehicles operated for interstate traffic for the use of passengers shall be certified by a municipal or State health authority as incapable of conveying disease; that water which is doubtful shall be rendered harmless, and that this fact certified by the authorities must be stated. The purity of ice placed in the water

for cooling is also guarded. The water containers are directed to be cleansed and thoroughly scalded at least once a week. Order of the vigilant Surgeon-General of the Public Health Service commanding all officers traveling to act as inspectors may serve to facilitate the enforcement of these regulations.

Dr. C. A. Pratt, after an absence of two years, has returned to Enosburg Falls, Vt.

Dr. C. W. Phillips, who came to Burlington from Arlington, Vermont, has removed to Bennington, Vermont, and entered the insurance business.

Dr. F. W. Norris, who left Swanton some time ago, has located in St. Albans as a specialist.

Dr. Ralph E. Sherwood of St. Albans died October 19th, 1912, at the home of his daughter, Dr. Grace W. Sherwood. The doctor had practiced in St. Albans since 1879. Lately he had not been active. He was born in Fairfield, Vermont, in 1842 and graduated from the old Berkshire Medical College at Pittsfield, Mass., in 1862. He served in the Civil War about three years, five as private and later as surgeon and was at the battle of Gettysburg.

Dr. Fred E. Lass of Brockton, Mass., has recently passed his examinations and been admitted to the Massachusetts bar. He has also by examinations before the various state examining boards, been admitted to practice as dentist and oculist; he is 41 years of age and is a shoemaker as well as doctor, lawyer, dentist and oculist.

Dr. and Mrs. J. J. Derven of Poultney are the parents of a baby boy. Mrs. Derven was Miss Gertrude Murphy of West Rutland, who previously was a special student of the University of Vermont.

Dr. Wm A. McGrath died at London, N. H., February 12th. He was born in 1858; graduated from Dartmouth Medical College in 1885 and had practiced in London for twenty-six years. He died of chronic Bright's disease.

Dr. Benjamin Cheener of Portsmouth, N. H., killed himself with a revolver by shooting into his forehead February 15th.

Some time ago a New York surgeon called a fellow surgeon of the same hospital who happened to be passing to assist him because he was

unable to control a hemorrhage and to complete the operation he had attempted. The patient was a poor woman and the fee was ten dollars. Later the surgeon called to the assistance of the first surgeon sued for \$25. The case finally reached the appellate court where it was decided to be against public policy to grant the plaintiff's request in the suit.

Dr. William Conrad Wile, former editor and publisher of the *New England Medical Monthly* and widely known as a writer on medical subjects, died at his home recently at the age of 66 years. He was born in Dutchess County, New York.

Dr. F. T. Briggs of Bristol, Vermont, is just recovering after six weeks' severe illness of pneumonia.

Dr. W. H. Englesby of Burlington is in Europe for a three months' stay.

Dr. Pond, whose pitching with the University of Vermont attracted Ned Hanlon's attention so that he was signed up by the Baltimore club and who figured in giving the Orioles a world's championship, is now at the head of the biggest eye clinic in the world at Cebu, Philippine Islands. A short time ago Pond, with his assistant, was treating 166 children every Tuesday and Friday for trachoma. Pond went to the Philippines as a surgeon in the early days of the war and was instrumental in building at Cebu a sanatorium for the treatment of 2,000 lepers.

CHOLERA.

The cholera situation throughout the world seems to be subsiding into the quiescent stage in which it usually remains during the first four or five months of the calendar year. The outbreaks which have been in progress in Japan, China, and southern Asiatic ports have for the most part disappeared. This does not include, however, those areas in southern Asia in which the disease is endemic and is present to a greater or less extent at all times. The disease has been present in various parts of Turkey in Asia, especially in Jidda and Meka. In Europe the outbreak which began in Constantinople during the early part of November continues. It has, however, not spread to any great extent so far

as known. During the week ended January 6th, there were reported in Constantinople 117 cases of cholera with 62 deaths, and from the beginning of the outbreak to January 6th there had been officially reported a total of 2,459 cases with 1,208 deaths.

A SOCIETY FOR THE ADVANCEMENT OF CLINICAL STUDY.

A society for the advancement of clinical study has recently been organized in New York, the purpose of which is to maintain a bureau of information to furnish to resident and visiting physicians definite information regarding the clinical facilities of the hospitals and laboratories of the greater city. For this purpose a bulletin board has been installed at the Academy of Medicine, 19 West Forty-third Street, in charge of a special clerk, who will be on duty between the hours of nine and six to answer all telephone inquiries (telephone 974 Bryant). The bulletin board will consist of two sections, on one of which will be posted month by month, the regular clinics, medical and surgical, also laboratory demonstrations, all of which are held at stated hours. The second section will include full announcements of daily operations and demonstrations of cases both medical and surgical, which as far as possible will be announced on the day preceding their performance. It is believed that these facilities will afford physicians who are interested in observing particular operations and operators or clinicians, an opportunity to obtain the desired end with the least trouble. It is hoped that by this means the large and unexcelled clinical facilities of New York will be made more accessible to those who may desire to make use of them.—*N. Y. Med. Journal*.

AMERICAN SOCIETY FOR PHYSICIANS' STUDY TRAVELS.

This society was organized in Philadelphia on Saturday, January 25th, and is the first medical organization of its kind in this country. It is modelled along the lines of the German Central Committee for Medical Study, members of which visited this country last fall. Its main object is to encourage physicians to study in foreign countries, and it is planned to send mem-

bers abroad upon occasions of special interest or when work is being done where investigation would be helpful to American medicine. These trips will be in charge of the officers of the club. Dr. J. M. Anders of Philadelphia was elected president at Saturday's meeting and Dr. Albert Bernheim, secretary. An executive committee of twenty-five members was also appointed, among the New York members being Dr. Theodore C. Janeway, Dr. Linsly R. Williams, and Dr. Richard Kovacs.

THE DE ROALDES PRIZE.

A prize consisting of a gold medal is offered by the American Laryngological Association for the best essay upon some subject relating to laryngology or rhinology, preference being given to essays offering new suggestions of practical value arising from original work. The competition is open to practitioners in regular standing of the United States and Canada who are not members of the American Laryngological Association. The essays must be typewritten in English, and placed in the hands of the secretary before May 1st. The author's name and address with the title of his paper must be enclosed in a sealed envelope which will be opened after the award has been made. The successful essay will be published in the *Transactions* of the association, but it may also be given to any other journal for publication. Harmon Smith, secretary, 44 West Forty-ninth Street, New York.—*N. Y. Med. Journal*.

PERSONAL.

Dr. John C. Berry of Worcester, Mass., has been notified by the Japanese embassy, in Washington, that the imperial order of the sacred treasure of the third class has been conferred upon him by the Japanese emperor, in recognition of his services in behalf of Japan, notably his contribution toward the improvement of medical and sanitary organizations and of the system of prisons.

FRENCH PHYSICIANS INCREASE THEIR FEES.

The American consul stationed at Havre reports that as a result of increased cost of living in

France, the physicians practising in Havre have decided to raise their fees, and the public has been notified accordingly through the press.

STUDENTS OF MEDICINE DECREASING IN UNITED STATES.

"The number of persons studying medicine in the medical colleges in the United States has decreased steadily since 1903, according to the annual report of the Council on Medical Education, which appears in a recent number of the *Journal of the American Medical Association*. In 1880 there were 11,826 medical students in the United States, in 1890 there were 15,404, in 1900 there were 25,171, in 1904, there were 28,142, in 1912 there were 18,412. This is the smallest number of medical students in the last twenty years. Of these, 17,277 are in 'regular' schools, 827 in homeopathic and 308 in eclectic schools. The total number of graduates in medicine in 1912 was 4,483, an increase of 210 over 1911, of 43 over 1910, but a decrease of 32 when compared with 1909 and of 1,264 compared with 1904. Of these graduates 4,206 were from regular schools, 185 from homeopathic and 92 from eclectic schools."

PERSONAL.

Dr. Reid Hunt, of the United States Public Health Service, has been appointed a member of the board recently created by the Bureau of Mines to investigate the hygienic precautions against dangers in mines.

Professor Ludwig Aschoff of the University of Freiburg, Baden, Germany, has accepted an invitation to deliver the Cartwright lectures of the Alumni Association of the College of Physicians and Surgeons, March 15 to 20, 1913. The exact date and subjects of the lectures will be announced later.

DOCTOR WILEY'S SUCCESSOR.

On December 16th President Taft named Dr. Carl L. Alsberg to succeed Dr. Harvey W. Wiley as chief of the Bureau of Chemistry, Department of Agriculture, and administrator of the pure food and drugs act. Doctor Alsberg is now employed as a chemist in the Bureau of

Plant Industry of the Department of Agriculture. He graduated from Columbia University, receiving the degree of A. B. in 1896, and the degree of M. D., in 1900, from the College of Physicians and Surgeons. He then went to the University of Strassburg; was a research worker at the German Imperial Institute for Experimental Therapeutics at Frankfort-on-the-Main, and studied at the University of Berlin, working while in Germany under Schneidburg, an authority on chemical pharmacology. In 1903 he took charge of the department of biological chemistry at the Harvard Medical School. In October, 1908, he entered the Bureau of Plant Industry, where he has been in charge of the pharmacological laboratory, working specially on plants poisonous to stock.

W. B. Saunders Company, medical publishers, are now established in their new seven-story building on West Washington Square. Constructed of reinforced concrete, the building is absolutely fireproof and equipped with every modern aid for the manufacture and distribution of medical books and for the comfort and convenience of their employees. A cordial invitation is extended the profession to inspect the new plant.

Major P. C. Fauntleroy, medical corps, United States army, has been directed to proceed to Vienna, Austria, whence he will go to the scene of the Balkan war to observe methods of caring for the sick and wounded.

Ground will soon be broken for the erection of a home for advanced cases of tuberculosis at Belmont and North Fiftieth avenues by the Jewish Consumptive Relief Association of Chicago. The new building is to cost about \$75,000.

Col. William C. Gorgas of the Medical Corps of the United States army and chief sanitary officer of the Panama Canal zone, has been awarded the Buchanan medal by the Royal Society of England in recognition of his remarkable administration of the health affairs of the canal.

Dr. Morris J. Lewi of New York, for more than twenty years secretary of the State Board of Medical Examiners, has resigned. Dr. Otto

von Huffman of New York, assistant in clinical pathology at the College of Physicians and Surgeons, has been appointed by the State Board of Regents to take Dr. Lewi's place.

It is announced that Chicago physicians are planning to erect a monument to the late Dr. Nicholas Senn. It is reported that already about \$12,000 has been pledged.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

CABOT (*American Journal of the Medical Sciences* March, 1913) reports four cases—one of wound infection with lymphangitis adenitis together with streptococcus throat infection followed by marked swelling of cervical and axillary glands; one of persistent boils and one of primary lymphangitis affecting the glands of the neck. In each the usual neutrophile leucocytosis was replaced by an extensive general and relative lymphocytosis. He concludes that such a blood picture may lead to confusion of diagnosis between adenitis and lymphoid leukemia. The distinction depends upon the recognition of an infectious origin for the adenitis, upon the lesser degree of lymphocytosis in the infectious type, and upon the course of the disease.

SWAN (*American Journal of the Medical Sciences* March, 1913) reports the use of adrenalin by hypodermic injection in cases of urticaria. Five cases are reported—two of gastrointestinal origin and three following the use of antitoxin. In each case a dose corresponding to about eight m. m. for an adult of one hundred and forty pounds (The preparation used was the 1 to 1000 adrenalin chloride solution of Parke, Davis & Co.). The dose was repeated in ten minutes. Two doses sufficed in every instance to cause complete fading of the rash. An improvement was usually evidenced eight minutes after the initial dose and was most marked after ten or twenty minutes. All itching ceased in from five to twenty minutes after the first dose. The author suggests from these observations that epinephrin might be used to advantage in certain more serious, yet similar conditions, as angioneurotic edema and anaphylactic.

WHITE (*American Journal Medical Sciences*, March, 1913) recounts his experience with yellow fever in New Orleans during the epidemic of 1905, reviewing the work of Reed, Carroll, Lazeor, and Agramonte, and draws the following conclusions:

The mosquito is the only disseminator of yellow fever, and the female stegomyia the only genus and species proved to be the carrier.

Yellow fever is only infective during the first three days of the attack and the mosquito biting a patient after that time receives no infection.

The stegomyia itself cannot convey the infection to another human until after the lapse of at least ten days subsequent to the ingestion of yellow fever blood.

One attack of yellow fever generally gives immunity—not always.

Feeble susceptibility in the negro is sometimes confused with immunity.

Mild cases are the rule with that race, and this causes many cases to be overlooked.

Destruction of breeding places for all varieties of mosquitoes and especially stegomyiae, anophelines and culicidae, is necessary in dealing with endemic foci. Rapid anti-epidemic work may be confined to destruction of infected stegomyiae alone; but this is short-sighted.

MEDICAL SECTARIANISM.

The question of medical sectarianism forms the subject of the presidential address of Dr. J. B. NICHOLS, Washington, D. C., before the Medical Society of the District of Columbia, published in *The Journal A. M. A.*, February 1. It temperately reviews the history of medicine as regards the origin of the various schools and shows the failure of the speculative method as compared with the scientific methods of the present day. It is admitted that the medical sectarians obtain sometimes a certain success by psychotherapy methods, but they have not advanced effective knowledge, and the less exacting requirements as to qualifications and the commercial considerations have largely augmented the numbers of their practitioners. They utilize a spirit deeply rooted in human nature, but their life history is usually brief and their practice is inconsistent with their professed principles as is the case of the homeopathy of the present day. Argument is usually futile against them, as most faddists are not amenable to reason, and the prospect of their absolute elimination is remote. It is by cherishing the scientific spirit and honest endeavor to meet the psychic as well as the physical needs of mankind that we will find ample field for our activities regardless of their existence.

NEUROBLASTOMA.

The history and literature of neuroblastoma, to which attention has recently been called by J. H. Wright, are reviewed and discussed by DOUGLAS SYMMERS, New York (*Journal A. M. A.*, February 1), who reports a case in which a careful examination of the tumor was made. This, as far as he has been able to learn, is the fourteenth one in which the tumor has been definitely recognized. He sums up his paper with the following: "The neuroblastoma is a malignant tumor composed of undifferentiated nerve-cells or neuroblasts and springs most often from nests of such cells lying in the medulla of the adrenal capsule, but occasionally from identical cells existing in other localities. The tumor presents a characteristic histologic picture marked by the presence of delicate fibrils supporting cells with scanty cytoplasm and richly chromatic, rounded nuclei, the cells being arranged diffusely, or in the form of rosettes, around tangled masses of fibrillated or homeogeneous material staining pinkish with eosin. In certain cases the fibrils are absent or poorly developed, rosettes cannot be seen and the richly cellular character of the tumor may, in these circumstances, lead to the diagnosis of sarcoma. In deference to its cellular unit the growth in question is most aptly provided for under the designation of neuroblastoma. Of the fourteen cases the most striking feature consists in the fact that nine

occurred in infants ranging from still-born to 19 months of age, and that in eight of the nine cases the origin of the growth was determined in the medulla of one or both adrenal capsules; in the other case the seat of origin is not stated. Of the nine cases observed in infants four were in males and four in females; in the remaining case the sex is not given. Three of the fourteen cases were encountered in adult males; in the other two the sex and age are doubtful. In these five cases adrenal capsules do not appear to have been primarily at fault, although definite information on this score is wanting. In children it would appear that the growth is divisible clinically into two symptomatic groups, one attended, roughly, by secondary exophthalmos, ecchymosis of the lids, infiltration of the cranium and regional lymphnodes, the other by rapidly increasing distention of the abdomen due to neoplastic infiltration of the liver and unattended by noticeable ascites or jaundice. In adults the number of recorded cases is too small and the clinical manifestations too bizarre to merit more than passing notice at present."

MELANOTIC SARCOMA.

H. K. GASKILL, Philadelphia (*Journal A. M. A.*, February 1), gives an account of a case of melanotic sarcoma rapidly developing from a pigmented mole of the left foot which had been treated as a wart and subjected to considerable irritation. After an operation for its removal metastases appeared at various points on the leg and later on the trunk as high as the third rib with the cancerous cachexia, edema of legs, abdominal ascites and general emaciation. The patient succumbed about seven months after the operation; no autopsy was allowed. Gaskill insists on the importance of viewing with suspicion cases of this type of melanotic nevi, irregular in outline, waxy, smooth, frequently only slightly elevated and of a dark purplish or black color, and of extensive operative measures if they show a tendency to extend and their removal is attempted.

ANTITYPHOID VACCINATION.

The prophylactic use of antityphoid vaccine in children is recommended by MAJOR F. F. RUSSELL of the U. S. Army Medical Corps, Washington, D. C. (*Journal A. M. A.*, February 1). This has as yet received but scant attention, though, as Osler says, typhoid fever is pre-eminently a disease of youth and early adult life. Russell considers this prophylactic method as especially suited and desirable for all those between 2 and 16 years of age who leave home for summer vacations, schools or colleges. He has collected statistics of 359 such antityphoid vaccinations by fifty different physicians in various parts of the United States, and the reports given may, he thinks, be considered as representing an average opinion of the degree of reaction at this age. No attempt was made to collect statistics of the local reactions, which are generally less in degree than in adults. Only the general reactions are tabulated, and these might be expected to be more severe than in adults, as the temperature is easily raised in childhood. The comparative tables given, however, would indicate that such was not the case, especially after the second or third dose. The dosage is based on body weight and not on age; the child is given that proportion of the adult dose which its weight bears to the average adult weight of 150 pounds.

No harmful effects have been observed in the 359 children, and, so far as is known, none of them have contracted typhoid fever, though some of the vaccinations were made over three years ago. Revaccination should be undertaken earlier and oftener in children than in adults, since they are immunized on the basis of body weight, and the second course should be given when this is materially increased. At present revaccination is advised in any event after three years. Further experience may permit a longer interval. He shows from the census figures that almost one-third of all deaths from typhoid fever occur in persons under 20 years of age, and a large proportion of these could have been saved by antityphoid immunization.

EDEMA AND NEPHRITIS.

A. R. MOORE, Berkeley, Cal. (*Journal A. M. A.*, February 1), presents a paper in reply to the recent article of M. H. Fischer (*Journal A. M. A.*, Oct. 19, 1912, p. 1429), in support of the colloid-chemical theory of edema and nephritis, which Moore considers invalid. The latter's conclusions are summed up in the following: "1. Fischer's conclusions as to edema are based on experiments with dead muscle, and it has been shown that dead muscle does not behave like living muscle. 2. Fischer assumes that when muscles are placed in distilled water they behave normally. This I have proved to be contrary to fact. 3. Fischer assumes the presence of acid in artificial edemas of frogs' legs but offers no proof for his assumption, and I have shown that a muscle in isotonic Ringer's solution may contain demonstrable quantities of acid without swelling. 4. It has been proved by Volhard that the artificial edema is brought about by ligating the lymphatic system, and that it is not caused by ligation of the arteries, as Fischer contends. 5. It has been proved that there is no demonstrable acid in the kidneys of rabbits having albuminuria, and also that relatively large quantities of acid added to the kidneys do not cause the proteins to go into solution. 6. In the hands of unbiased physicians the use of Fischer's treatment of edema and nephritis gives negative results or worse."

CHRONIC APPENDICITIS.

C. D. AARON, Detroit (*Journal A. M. A.*, February 1), calls attention to a diagnostic sign which he has found exceedingly valuable in deciding when and when not to recommend operation for chronic appendicitis. In many cases he has been able to induce a referred pain or distress in the epigastrium, left hypochondrium, umbilical, left inguinal or precordial region by a continuous firm pressure over the appendix at McBurney's point. All the patients on whom an appendectomy has been performed have fully recovered from their apparent digestive disturbance. The digestive symptoms were caused by an infringement on the nerves, which reflexly induced a perversion in the secretion of gastric juice. In view of the difficulty of diagnosis of chronic appendicitis without frequent recurring attacks this symptom is of special value; moreover he thinks it will explain many cases of gastric and intestinal disease for which the appendix is responsible and may be the only part that requires attention. McBurney's tender point may be found in many cases of appendicitis though not in all, and this referred pain on pressure, Aaron thinks, is a valuable sign in the diagnosis of chronic appendicitis itself.

WATER ABSORPTION.

M. H. FISCHER, Cincinnati (*Journal A. M. A.*, February 1), vigorously replies to Moore's criticisms of his colloid-chemical theory of water absorption by protoplasm. He accuses Moore of being unfamiliar with the literature of the subject, referring to the authorities, and says: "Did I not believe that the work of Hoppe-Seyler, Araki, Iwasawa and Zillesen on the abnormal production of acids in the tissues in lack of oxygen; that of Hamburger, von Limbeck, Gürber and Eykmann on the effects of acids and salts on the swelling of cells; that of Grützner, Kahlenberg, True and Heald on the application of the ionic theory to the action of acids on protoplasm, and the colloid-chemical studies of the last decade are more familiar to every other student of the subject than to Moore, I might be tempted to review again the contributions of these authors." He quotes from his already published articles passages to refute Moore's charge that he has made no reference in them to the work of Loeb, points out where he differs from that author and quotes from Meigs to show that in his later work he has discarded his former views, which Moore it seems has taken up. He says Volhard, if correctly quoted, is in error, so proved by experiment, and what Maxwell's experiment proves is only that the frog's skin behaves like the kidney, salivary gland, etc., in that it is capable of doing work. Osterhout's clever experiment is as easily explained, he says, on a colloidal basis as on an osmotic one, and gives his reasons. The rest of Moore's paper, he says, only repeats former criticisms already noticed. The present article, Fischer says, completes his discussion with Moore, though he will from time to time, as needed, touch on criticisms such as he feels "spring from scientific skepticism or the answer to which is not obvious from what I have previously written."

REPAIR OF THE PERINEUM.

GREER BAUGHMAN, Richmond, Va. (*Journal A. M. A.*, February 1), describes his methods of delivery and repair to the torn perineum. He uses the lithotomy position until the head begins to be expelled and, bathing and sterilizing the perineum, he pushes the anterior vaginal floor backward and upward and endeavors to flex the head more and more. If the perineum seems tight when the head no longer recedes he gives a little anesthetic and, as the nurse extends the legs and everts the feet as soon as the apex of the vertex is delivered, he has the anesthetic pushed and tries to make delivery between pains. The advantage of extending the legs and rotating the thighs out is that the skin from the buttock and superficial fascia is put at the disposal of the stretched perineum better than the obstetrician can do by using the hand. If the perineum seems so tight that a tear is inevitable it is best to nick the sides. His method of immediately repairing the perineum which has been with him most successful is described as follows: "The patient is placed on her back with the thighs flexed on left abdomen and held in place with a suitable support like the Robb-Kelly strap. The vagina is cleansed of the clots and the upper part of the vagina packed with sterile gauze or cotton, so as to make the field of operation as bloodless as possible. Then a good light is thrown into the vagina. Robbins recommends sewing the mucous membrane and submucous fascia of the vagina to the mucous membrane and submucous

fascia of the opposite side of the tear with a continuous chromicized catgut suture. Care must be taken to catch the muscles with the suture. The suture begins at the upper part of the tear in the vagina and is continued on down toward the vulva, uniting the mucous membrane and fascia with a continuous running suture, the operator trying to match the part of one side to that from which it has been torn. This restores the shape of the vagina (the vaginal sheath). After the vulva has been reached the suture and needle are laid in the vagina to be used later to unite the skin with a continuous suture. If there happens to be another tear in the vaginal sulcus or median line, which is almost always the case after the use of forceps, that tear is sewed, the mucous membrane and fascia to the mucous membrane and fascia of the opposite side of the tear with a continuous suture, just as on the other side, and when the vulva is reached the suture is temporarily laid aside. Then the crown sutures of silkworm gut are put in from the skin surface, just as they usually are done, slanting downward, but the rectum should not be entered, as sometimes happens, unless one feels in the rectum with a gloved hand. It is well to put the wound well forward with the sutures before tying, to see that the perineum is well cared for; then they are tied. The catgut suture that was stopped at the opening of the vulva is then picked up and with a continuous suture the denuded surfaces are brought into apposition and the suture continued down the skin. If the rectum has been torn the sphincter may be caught and brought together by a silkworm-gut suture introduced in the skin just above the rectum, passing through the muscle and out at the other side through the skin. A similar suture just above the mucous membrane of the rectum, introduced from the skin, passing around the tear in the rectum, and coming out on the skin of the opposite side, will draw the mucous membrane down like a purse-string."

OVARIAN METASTASIS IN MUMPS.

Two cases of ovarian involvement in epidemic parotitis are reported by HARLOW BROOKS, New York (*Journal A. M. A.*, February 1), as of interest on account of the apparent infrequency of this complication, cases of which seem to be seldom reported. Both of his patients were young multiparae, one 28 and one 24 years of age. All the recorded cases developed in young children and young girls so far as he has discovered, except two reported by Rizet and those here recorded. In neither of his cases has there been a subsequent pregnancy of the patient as long as she has been under observation, though in one there are other apparently possible causes. In none of the other recorded cases is anything mentioned as to this point. It is not unlikely, he thinks, that the protected location of the ovary is largely responsible for the infrequency of the complication, as traumatism, which is probably the cause of a large number of cases of orchitis in mumps, is practically eliminated. The statement of Trousseau that ovaritis is a mild as well as infrequent complication of mumps is, he thinks, well borne out by the reports. In no case has there been a pathologic examination of the diseased gland. He is inclined to think that the metastatic process is a simple inflammatory one not likely to disturb ovarian function.

(Continued on page xiii)

PNEUMONIA PHYLACOGEN

**THE NEW TREATMENT
FOR PNEUMONIA.**

**COMPLETE LITERATURE
CONTAINING MANY TYPICAL CASE HISTORIES
SENT TO PHYSICIANS UPON REQUEST.**

**PARKE, DAVIS & CO.
DETROIT, MICH.**

THERAPEUTIC NOTES.

VAGINAL DISCHARGES.—In many instances vaginal discharges persist for the reason that no energetic local measures are taken to combat the causative condition. Thus, in vaginitis, of either specific or non-specific origin, if local applications in the form of tampons soaked in an antiseptic solution of positive value were employed in a systematic manner, relief would follow. In this connection the more than ordinary value of ECTHOL (Battle) in vaginal discharges may be mentioned. In vaginitis, used on tampons, it exerts its germicidal influence on the causative organisms and brings about a gratifying relief from the annoying features accompanying the vaginitis. ECTHOL will also be found of much service in cervical erosions.

THE NEW TREATMENT FOR PNEUMONIA.—After long and laborious clinical study—extending, in fact, over a period of more than twenty months—Messrs. Parke, Davis & Co. announce the addition of Pneumonia Phylacogen to their list of therapeutic agents. This product is designed for the treatment of pneumonia or any infection caused by the pneumococcus. Administered in the early stage of the disease it is said to cut short the pneumonic process in a manner that is truly remarkable.

Pneumonia Phylacogen has been administered to patients of all ages and of many nationalities, with highly gratifying results in a very large majority of cases. "From experience gained in the study of typical cases treated under favorable circumstances," one writer remarks, "we are led to believe that almost every case of pneumonia seen within the first twenty-four hours after the initial chill will recover if properly treated with Phylacogen." Another observer, a professor in one of the large American medical schools, pays the product a high compliment in these words: "Pneumonia Phylacogen is the only therapeutic agent in my experience that has ever shown a definite therapeutic action on the pneumonic process."

In view of the fact that pneumonia is one of the commonest and most fatal of infections (it is said upon good authority that it causes more deaths than tuberculosis, scarlet fever and smallpox combined), the new Phylacogen gives promise of a veritable therapeutic blessing.

The value of bromides as therapeutic agents, has only been accentuated in recent years. Many chemical modifications of the bromide salts have been offered, but not a single one has been found which possesses properties, that make it more desirable for the practitioner, than the well known compounds. On the other hand, the administration of the pure salts is often attended by certain disagreeable results, commonly embraced under the name of bromism. These disagreeable by-effects can be almost entirely eliminated by the use of adjuvants and correctives. Such a combination is offered in Neurosine, which represents the most careful product of pharmaceutical skill, providing the profession with a nerve sedative which is safe and efficient.

In the early stage of phthisis, Cord. Ext. Ol. Morrhuæ Comp. (Hagee) does more good than any other medicinal agent. Even when symptoms of secondary infection are prominent, such as fever, sweating, and rapid wasting, it is well borne. It is also valuable in preventing the development of tuberculosis in those who, through physique and heredity, have a marked predisposition to the disease.

Cord. Ext. Ol. Morrhuæ Comp. (Hagee) improves the general nutrition, increases the number of red blood cells, and favors the accumulation of fat in the body and does not excite nausea, eructations, vomiting and diarrhea.

A NEW WORK ON THE HISTORY OF MEDICINE.—W. B. Saunders Company, publishers, of Philadelphia and London, have in active preparation a work on the History of Medicine by Dr. Fielding H. Garrison, Principal Assistant Librarian, Surgeon-General's Office, and Editor of the Index Medicus. Dr. Garrison's twenty years' experience in medical bibliography, and the unusual advantages derived from his close touch with the rich stores of the Surgeon-General's Office, fit him most admirably for such a work as this.

His book will present the history of medicine from the earliest ancient and primitive times; on through Egyptian Medicine, Sumerian and Oriental Medicine, Greek Medicine, The Byzantine Period; the Mohamadan and Jewish Periods, the Mediaeval Period, the Period of the Renaissance, the Revival of Learning and the Reformation; the Seventeenth Century (The Age of Individual Scientific Endeavor,) The Eighteenth Century (The Age of Theories and Systems,) the Nineteenth Century (The beginning of Organized Advancement of Science,) the Twentieth Century (the beginning of Organized Preventive Medicine). There will also be Appendices covering Medical Chronology, Histories of Important Diseases, Histories of Drugs and Therapeutic Procedures, Histories of Important Surgical Operations, and Bibliographic Notes for Collateral Reading.

Dr. Garrison's work will undoubtedly be a valuable book to every medical man. In this one volume he will get a complete history of medicine from its earliest times, presented in a concise form.

The illustrations are intended to stimulate the reader's interest in the picturesque aspects of medicine and in the personalities of its great leaders. The biographies will be confined to the most important facts and to interesting personal traits. The original bibliographic references to the important discoveries, operations and experiments will be given. Each period is to be followed by a brief survey of its social and cultural phases. Altogether it promises to be a most important addition to medical literature. We await its publication with much interest.

As a prophylactic in hay fever and bronchial asthma, Kayser recommends a tablespoonful of 5 per cent. calcium chloride in milk every two hours for three or four days.

EARLY PARESIS.

ALFRED GORDON, Philadelphia (*Journal A. M. A.*, February 1), says that, while the clinical picture of paresis is characteristic in its advanced stages, the same cannot be said of the early period of the disease. Hence need of proper measures taken in time, the neglect of which may produce deplorable results. Its beginnings are insidious and always progressive. The earliest psychic manifestation is the slow, irregularly progressive dementia which is naturally first observed in cultured individuals. Memory is usually affected early in the disease. The patient shows defects in his work, mistakes in figures and in writing; with these may be seen neglect in his personal appearance and oddities in behaviour and irregularity in habits. The character and disposition are changed. There may be apparent a neurasthenic depression or in others a hypermanic exaltation and perversion of the moral sense. The defective memory, impaired attention and observation, judgment and disposition constitute the most important psychic alterations in the early stage. There are three types of bodily manifestations that not infrequently announce the oncoming paresis—apoplectic and epileptic seizures and attacks of aphasia. Vertigo is another manifestation. Another early body symptom is pupillary inequality, which Gordon considers most pathognomonic. The characteristic speech and tremor are infrequent in the early stages. He goes at length into the differential diagnosis and lays special stress on the lymphocytosis in the cerebrospinal fluid, the Noguchi precipitation test and the Wassermann reaction in the diagnosis from neurasthenia. In case of cerebral syphilis there is more difficulty, but the character of the progressive dementia is different and the presence of headache and local symptoms will often aid the diagnosis. In chronic alcoholism and in lead-poisoning syndromes occur closely simulating paresis, but if the Wassermann and other tests mentioned are absent and the symptoms disappear after the withdrawal of alcohol the differentiation can usually be made. In lead encephalopathy the dementia seems to dominate from the onset and the physical symptoms aid the diagnosis. The effect of treatment is one of the best means of differentiation. In conclusion Gordon speaks of the medicolegal considerations involved and the importance of recognition of the condition in view of the possible actions of the patient.

SEX INSTRUCTION IN SCHOOLS.

P. ZENNER, Cincinnati (*Journal A. M. A.*, February 1), gives an account of the later results of a course of instruction in sex hygiene given some five years ago in one of the Cincinnati schools. The school was in a slum district where the children were exposed to demoralizing influences and the moral tone was low. The immediate results were to make the scholars more cleanly and decent, and the influence also extended to the homes. Many parents came to the school to thank the teachers for what had been done. Four and a half years later, when the members of the class had become young men and women, Zenner requested the teachers to look up their records and present condition. Between one-third and one-half of them could be traced and the good results were found to have been lasting. With one



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exception the girls have all been found to have led pure lives and kept their minds pure. While, as was to be expected considering their history and environment, the report is not so favorable with the boys, the number of them with good habits and clean lives is unusual and a much better showing than the average of young men. Zenner thinks that the record shows what can be done and is an argument for general adoption of such methods of instruction. He admits that home instruction in such matters is ideal, but it cannot replace that in the school, and the notion of delaying such knowledge in children is futile. If they cannot have proper instruction from proper sources they will have it from evil sources and of a perverted kind. School instruction itself, if improperly done, may do harm, and the method he suggests to meet all possible objections is as follows: It applies to class instruction. "The lesson in each instance should be a prepared one. The teacher, whether school teacher, physician or any other, should recite it to the assembled parents, with possibly the superintendent, a physician or other supposed expert in the audience. Only if it be satisfactory to this gathering should the lesson be given to the class. Such a procedure would have various advantages. It would be a reasonable assurance that the teaching would do no harm. It would remove the antagonism of the parents to such instruction, which is now its chief stumbling-block. The teacher might receive suggestions from the audience which would help him to make the lesson more valuable. Finally, the lesson might be a great source of instruction to the parents, often enabling them to teach their children rightly at home." Zenner says the public discussion of sexual matters is not without its possibilities of harm, but the greater danger of silence justifies it. If we can by instruction of the young lessen the great menace of social disease as well as help to create higher ideals there will then be no more need of so constantly bringing these matters before the public.

ARTERIOVENOUS ANASTOMOSIS.

B. M. BERNHEIM, Baltimore (*Journal A. M. A.*, February 1), reports a case of successful reversal of the circulation of all four extremities of the same individual, the possibility of which has been denied by Coenen and Wiewiorowski. Bernheim has collected fifty-two operations in the literature, including six of his own, and while the results are admittedly discouraging they demonstrate several points of interest and, all things considered, held out a hope of better things to come. Vascular surgery is still in its infancy and Bernheim holds that judgment as to the possibility of this operation should be withheld until a sufficient number of operations have been done by surgeons especially skilled in vascular work to justify a really unbiased analysis. Next in importance to the skill of the operator is the selection of cases, most cases of gangrene or threatened gangrene being inoperable. Evidence against Coenen's contention is accumulating—another successful case has been reported by Davies in London. In the patient here described he had reported two successful operations on the legs in a previous article and early in 1912 the same conditions—pain, actual and threatened gangrene—called for a reversal of the circu-

lation in both arms. This was done on the left arm on January 23 and on the right on March 5, the brachial artery and vein being united by lateral anastomosis. Only in his first operation on the left leg was end-to-end union used. The lateral method is the simplest and less risky and gives better chance of success. The patient has been benefited in her left leg and left arm; on the right there is still pain at times, but relief is hoped for in the future. Function is good. Some months ago a toe was burned and an ulcer developed and healed so slowly that it was removed at the patient's request. Outside of that there has been no gangrene and the circulation seems good. The mental condition is not satisfactory, a complication not rarely observed in Raynaud's disease. Further developments will be chronicled as they arise. The case goes, he thinks, a long way toward proving that there is no physiologic reason why the reversal of circulation may not be obtained in the extremities.

TETANUS.

F. VAN DER BOGERT, Schenectady, N. Y. (*Journal A. M. A.*, February 1), after noticing the published cases of the good results obtained in developed tetanus from large doses of anti-tetanic serum, reports one of his own. The patient, a girl 14 years old, had stepped on a nail about a month before treatment, causing a wound which was still present. The symptoms were trismus, rigidity of neck and extremities, pain on palpation of flanks and abdomen and tetanic spasms. In the nineteen days treatment of 587,500 units of tetanus antitoxin, obtained from the state laboratory, were given. The spasms ceased for a considerable time before the cessation of treatment. Two symptoms, probably attributable to the serum, caused its final discontinuance, swelling of the left hand, mild urticaria and rise of temperature lasting three days. There was also a papular rash recorded. The dose given is apparently a record one and shows the value of such doses or at least a tolerance for such dosage for this condition.

CELLOIDIN SECTIONS.

M. BUCHSBAUM, Chicago (*Journal A. M. A.*, February 1), mentions the disadvantages of the Herxheimer and Cullen methods for making celloidin sections. The former takes twenty-four hours. The second, which is quicker, would be the method of choice and has its advantages when quick diagnosis is paramount over nicety of appearance. He offers a method of his own, the principle of which consists in shaking the specimen in contact with the fluid reagents and gives the steps in detail, the whole process occupying only from forty-five minutes to one hour. The shaking dislodges the air bubbles confined in the tissues and prevents the formation of a coagulation membrane, thus allowing the reagent to act at once centrally and peripherally instead of having the penetration delayed by the necessity of osmosis through the albumin formed. He does not offer this as a substitute for Cullen's method, but rather as an aid to the pathologist and surgeon in making a quick histologic-pathologic diagnosis when such is required.

THE HUMAN BODY AND THE CONQUEST OF THE AIR.

Aeronautics, a familiar subject since the beginning of the twentieth century, is usually considered solely with reference to the ingenious modern devices and mechanisms which have made possible the aeroplane or the airship. One rarely stops to consider the peculiar demands made on the human body in the field of aerial navigation and the physiologic requisites for successful conquest of the air by man. In ballooning the limitations set by altitude and its attendant involvement of respiration have long been appreciated. In the modern pursuit of aviation, however, this aspect is only one of many that involve the performance of the human machine in the air. We cannot expect man to fly by his own efforts. The eminent Berlin physiologist, Professor Zuntz, has pointed out that the clue to the successful pursuit of aviation is to be sought in the domain of psychology. Whether it be in flying in a balloon or in aerial propulsion with the aid of a motor, certain organs of the body are of preeminent importance, and their normal performance is indispensable for success. One need only recall some of the features associated with the performance of the organs of sense to realize how largely they determine the poise of the flyer and his ability to attain equilibrium and to adjust his balance promptly. The action of man is guided by the senses. They bring directly to the consciousness certain impressions which control familiar movements, such as walking, running, jumping and other performances of skill and dispatch. Every one appreciates how the unexpected sight of something horrible may alter the posture of the body, how the body is automatically arched backward when some obstruction suddenly presents itself to view. These natural movements to avoid a collision may lead to dangerous situations if they are unconsciously executed by an aviator whose hand happens to be guiding the mechanism of a flying machine. The conquest of the air, says *The Journal of the American Medical Association*, requires not only the building of machines which will fly, but the development of human machines which can control them under entirely new conditions. New industries and new occupations have their characteristic diseases. To this class belongs the characteristic malady—*mal des aviateurs*—to which the newest performances of aviation sub-

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ject its devotees. The conquest of the air has brought problems that border on the field of the physiologist and physician as well as on the domain of engineering.

THE HEALTH OF LONDON SCHOOL CHILDREN.

Only in the last few years has the law required every child attending an elementary school to be physically examined on entering and leaving and, therefore, statistics on the health of school children in England are only now available. About a million and a half of children are examined annually. The report of Sir George Newman, chief medical officer of the Board of Education for 1911, has just been issued. It shows the condition of 186,652 children in thirteen counties and sixteen urban areas and is far from satisfactory. Only in one urban area did the percentage of "good" nutrition reach 45 and from this figure it ranged down to as low as 3.8. Of 200,000 children examined in London more than half were found to be defective and over 78,000 were recommended for treatment. The malnutrition is due in the great majority of cases to ignorance of the relative value of foodstuffs and the means of using them economically and only in the minority to poverty. About 0.5 per cent. of the children are feeble-minded and of these about one-seventh are of such low grade as to be uneducable. A summary of the report appears in the London letter in a recent number of *The Journal of the American Medical Association*.

ANTITYPHOID VACCINATION IN CHILDREN.

The use of antityphoid vaccine among children has, as yet, received scant attention. Osler says that "typhoid fever is a disease of youth and early adult life. Of the 1,500 cases treated in Johns Hopkins Hospital, there were under 15 years of age, 231; between 15 and 20, 253; between 20 and 30, 680; between 30 and 40, 227; between 40 and 50, 88; between 50 and 60, 11."

In a recent issue of *The Journal of the American Medical Association*, Major Russell of the Army Medical Corps discusses the inoculation of 359 children, between the ages of 2 and 16 years, who have been vaccinated by fifty different physicians in many parts of the United

States. No harmful effects have been reported in any of the 359 children and, so far as known, none has contracted typhoid fever, although some of the vaccinations were made over three years ago. Major Russell regards it as a particularly valuable method in the case of children and young people leaving home for summer vacations, school, college, etc. The importance of checking typhoid among the young is shown by the fact that in the registration area of the United States there were in 1909, the last year for which complete mortality statistics are available, a total of 3,366 deaths from typhoid fever in patients under 20 years of age, out of a total of 10,722 of all ages, or almost one-third of all deaths from the disease. They were distributed according to ages as follows: Under 2 years, 97; under 3 years, 139; under 4 years, 132; under 5 years, 110; 5 to 9 years, 647; 10 to 19 years, 2,174. A very large proportion of these deaths can, without question, be prevented by the more frequent use of antityphoid vaccine.

CHINA SUPPRESSING THE OPIUM HABIT.

The establishment of the Chinese Republic has led many occidentals to change their opinion as to the lethargy and inertia which they supposed characteristic of the inhabitants of the celestial empire. There is another story of accomplishment in China, however, during the past five years, which makes it even clearer than the recent revolution that there are undreamed of springs of energy in the Chinese people. About five years ago the Chinese government decided that opium smoking, which had become the national vice of China, even to a greater extent than alcoholism is of the Western nations, must stop, and that within ten years. It is scarcely to be wondered at that when this government edict was issued it was greeted with smiles everywhere; five years have passed and now the world knows that success in the great national crusade seems almost assured.

The method that China is pursuing is interesting. Five years ago China and Great Britain made what is known as "the ten years' agreement," by which the British government undertook to reduce the amount of opium sold in Calcutta on government account for export to China by 10 per cent. every year until the traffic had ceased. On her part China agreed to di-

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minish her own production in a corresponding way. Measures were to be taken to reduce the growth of opium in China 10 per cent. each year until at the end of ten years no more would be raised. With supplies from India cut off and the home crop reduced and eventually suppressed altogether, the opium habit must necessarily disappear. The results accomplished thus far are promising. Travelers report that it is no longer common to see men smoking opium at their own doors. Even two years after the edict, those who smoked did so in secret. The edict is being enforced. The agricultural map of China

(Continued on page xx.)

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shows after five years that there has been an actual reduction of 50 per cent. in the production of opium. There has been as great a reduction in its use. All the world will watch with interest this other awakening of China, and the oriental method of solving a great social question, says *The Journal of the American Medical Association*. In the West we have our social problems of a similar nature and China's example may prove illuminating and helpful.

APPLIED IDEALS.

Old in phrase, but distinctly modern in force is the keynote of the inaugural address of Governor Sulzer of New York: *Salus populi suprema lex*. His appeal was especially strong to employers to recognize the economic wisdom of keeping their employees as free as possible from infection, adequately remunerated, well housed and not overworked. Conditions, still too frequently found, in which the work of women and children is unnatural and beyond their strength, must produce a race of workers lacking in both stamina and resourcefulness. But, if a healthy individual means a healthy business, not less must that healthy individual mean a healthy government. Hence the natural conclusion, according to Governor Sulzer, is that ". . . any industry that robs the vitality and destroys the initiative of workers is detrimental to the best interests of the state and menaces the general welfare of the government." Governor Sulzer's remarks are timely, says *The Journal of the American Medical Association*. They also serve to recall the many instances in which factory, mining and other great business organizations have already applied to the conditions of their operatives such betterment ideals as those mentioned, and not only these but also many others whose fitness shows special study of particular conditions. A list of "features of factory administration designed for the benefit of operatives" in but one state includes, among many other items of welfare work, factory ventilation and sanitation, family supplies at cost, gymnasiums, hospitals and emergency and medical treatment, lavatories and lockers, lunch and dining-rooms and annual outings. This is, indeed, "the hopeful side of the labor problem." Such consideration results in mutual loyalty between employer and employed, in healthier and better satisfied work-

ers, in work of both higher grade and greater value. An adequate summary of the situation is given by the report of one firm employing over 20,000 men and spending thousands of dollars on welfare features that "it pays."

SURGERY FOR CRIMINAL TENDENCIES.

An interesting after-development in a surgical case which attracted much attention about four years ago has just occurred. A prisoner serving a long sentence in the prison at Dannemora, N. Y., was pardoned by Governor White on representations which seemed to make it clear that he had been cured of his criminal tendencies by a surgical operation. Following the operation, the prisoner's character seemed to change. From being sullen and morose he became bright and cheerful, walked with firmer step, held his head erect and appeared to be a different man. It is not surprising that a few months after the operation the governor was induced to set him free on parole, and there seemed to be every reason to hope that a useful citizen had been restored to society in place of the criminal that had been taken from it.

Unfortunately the arrest of the paroled prisoner during the first week in January of the present year, for a series of burglaries with regard to which the evidence is complete, seems to make it clear that the improvement was only temporary, or that the operation and his subsequent good conduct were steps in a scheme to secure his release from prison. It is of course only what might be expected, says *The Journal of the American Medical Association*. There is no trustworthy evidence to show that changes in moral character, independent of mental deterioration, result from pressure on the brain. Sensational announcements of improvement in such cases after surgical intervention, like those that used to be made after various surgical procedures in epilepsy, need to be controlled by the subsequent history of the case. Immediate improvement in such cases is usually mental rather than physical, and successes reported before many years have tested their permanence are liable to produce false impressions.

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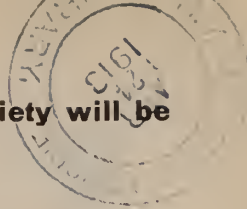
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TABLE OF CONTENTS

ORIGINAL ARTICLES:—

- Constipation,
By E. B. Watson, M. D. 79
- Some Common Results of the High Percentage
of Fat Used in Infant Feeding,
By C. K. Johnson, M. D. 84
- Membership in the American Medical Association—The Proposed Change of Name,
By George H. Simmons, M. D. 91

- EDITORIAL 94
- PUBLIC ACTS OF MEDICAL INTEREST PASSED BY THE
GENERAL ASSEMBLY OF 1912..... 100
- OBITUARY 103
- NEWS ITEMS 103
- THERAPEUTIC NOTES xii

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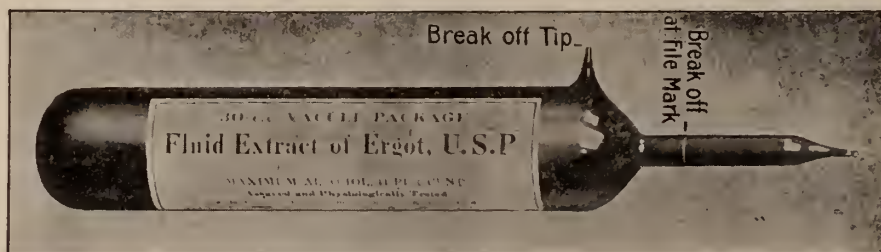
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ORIGINAL ARTICLES.

CONSTIPATION.*

BY

DR. E. B. WATSON.

Constipation is a common menace to human life from start to finish. It prevails among all classes and conditions of the human family. Seldom do we find it entirely absent either in the state of comparative health or in established disease.

It is doubtful if any mal-condition demands more frequent or more constant attention independently or in connection with the host of accompanying ills. Probably there is no other condition on which so many diseases depend for the primary cause.

The frequent occurrence of constipation, its insidious character, and stubborn resistance to preventive and curative measures, together with the grave and often fatal results, makes this affection a subject especially worthy of consideration.

I offer no apology for presenting a subject so inexhaustible. I know I can cover but a very small part of this wide field of pathology, and it is not my aim to offer anything new or original, but to awaken if possible a keener sense and appreciation of the great significance and importance of constipation as a potential and serious factor in disease. While constipation is not responsible for every ill that flesh is heir to, yet from both the surgical and pathological standpoints it is far more concerned in the cause and complications of disease than is generally acknowledged, or understood, judging at least from the passive and indifferent manner in which it is so often treated or not treated at all, and allowed to take its own course to a serious and frequently fatal termination.

Until a sufficiently comprehensive appreciation of the necessity seizes us, and inspires a more conscientious, faithful and scientific application of our efforts to prevent and control this condi-

tion, the large majority of people will continue to suffer from the common complaint, they will continue to lose confidence in their physician, and the business of the patent medicine vender will continue to increase.

The pernicious custom of relying on the pill box purchased at the store is not wholly the fault of the people themselves, as the enormous quantities of laxative tablets, etc., sold to the physicians by the competing pharmaceutical houses sufficiently demonstrates this fact.

Like every other pathological condition constipation should be treated in a rational systematic scientific manner.

Constipation is a symptom rather than a disease entity, an aberration from a normal functional activity. It is the infrequent and incomplete alvine evacuation leading to retention of intestinal contents. The normal functions of the intestinal tract—the processes of digestion, absorption of nutrition, and the expulsion of waste—are among the most essential to the welfare and maintenance of life.

Constipation is the principal disturbing influence of these functions.

Physiologically there should be at least one evacuation every 24 hours, an apparently healthy condition however is often maintained with less. The frequency of discharges does not so much signify as does their copiousness and consistency.

The causes of constipation may be classified, viz.: Anatomical, mechanical, habit and dietetic, and systemic. The anatomical conditions preventing free and normal action of the bowels are seen most frequently in early life, even in-utero.

In the embryo there is no colon up to the fourth month. It is very short in the new born, and yet the large intestine is longer in proportion than in the adult, and three times as long as the body of the mature fetus itself, and the sigmoid forms a large part of it. In the length of the small intestine there is the same disproportion. At nine months it is twelve times as long as the body of the fetus. In the adult only eight times as long.

This comparative great length of the intestinal tract in the infant must act as an important factor in hindering the free and rapid progress of its contents. The comparatively longer route would

*Read by Dr. E. B. Watson before the Washington County Medical Society.

seem to require a longer time in transit and affords a larger surface for absorption, thus encouraging dryness and hardness of the feces.

The pelvis of the young child is relatively small and crowds the intestines closer together, thus tending to create multiple flexures, kinks, twists, and displacements. Altogether the anatomical conditions of the infant appear to be decidedly predisposing to constipation. If we did not well know and appreciate the wonderful and ample provisions of Nature in all her works we would here be strongly inclined to question her wisdom. Congenital malformations are very active agents in producing constipation. These anomalies fortunately are comparatively infrequent. The rectum and anus are regions most often involved.

Bodenhamers' classification is viz.: "Narrowing of the rectum and anus without complete occlusion. Complete occlusion of the anus by a membranous diaphragm, or well formed skin. Absence of anus, and the rectum ending in a blind pouch.

The anus normal in appearance, but ending in a cul-de-sac, and the rectum ending in a blind pouch above it. Absence of the rectum and the gut ending in a fistula at any point of the perineum or sacral region. The anus absent, and the rectum ending in the vagina, bladder or urethra. The total absence of the rectum." These morbid anatomical conditions produce more or less complete obstruction of the fecal contents. Congenital occlusion of the small intestine occurs less often. Meckels' diverticulum being one illustration, and umbilical tumor or congenital mucous polypus of the umbilicus is another of these defects. Duodenal obstruction sometimes occurs, usually near the opening of the biliary or pancreatic duct. Malformation of the ileum is most common in or about the ileo cecal valve. Mechanical causes of constipation are numerous, some of which may be mentioned, viz.: Intestinal displacements, such as enteroposis, intussusception, prolapsus of the rectum, and twisting and kinking of the gut. Pressure of abdominal tumors, a retroverted or gravid uterus, a distended bladder or enlarged prostate. Fecal impaction, a nest of lambrocoides, constricting ring, incarcerated hernia, adhesions, new growth, etc., are all quite frequent causes of obstructive constipation.

Again habit plays a very important role in constipation. The hurry and bustle of modern

life has set too rapid a pace for moderate old Nature. Her physiological functions demand a certain unlimited period of time.

The cares and responsibilities of business, social and domestic life demand haste. Whatever combines to induce speed and save time has become a necessity. There is no time for trifles. Attention to a request of Nature like the mere call to evacuate the bowels is of too slight importance to be noticed. If, however, because of the imperative importunity it is heeded, and a visit to the closet is reluctantly made, the limited time allowed is usually divided equally between the inefficient effort of defecation, a hasty perusal of the daily news, and inhaling the smoke of the ubiquitous cigarette.

Nature is so mortally slow that she must either cut out most of her unreasonable demands or strike a faster gait. If possibly a trifle overdrawn this is the tendency of modern life. Men, women and children all have the contagion and are alike suffering the consequences.

A return to first principles and to the simple life is the only remedy. The lack of a regular habit of going to stool at a fixed hour each day is one of the most common reasons for constipation. Normally the feces collect in the sigmoid flexure, remaining until by natural stimulus peristalsis is excited, when they are moved downward into the rectum, there creating a desire to defecate. If the warning is not promptly answered, and the fecal contents expelled, a reverse peristalsis returns the feces to the sigmoid. Continual repetition of this occurrence results in a loss of sensitiveness of the mucous membranes, muscular tonicity is diminished, or lost entirely, peristalsis is correspondingly lessened, and quantities of fecal matter may accumulate in the sigmoid and rectum without exciting the least desire for stool. This is the deplorable condition not infrequently met with.

Eating at irregular intervals and too rapidly, incomplete mastication and salivation, a foul mouth and dirty decayed teeth, irregular hours of rest and recreation, the sedentary life with lack of fresh air, prolonged mental and physical exercise, all produce muscular atony and loss of reflexes, necessary for the successful performance of the natural functions.

Dr. King in an address before a body of physicians in Burlington, recently, emphasized the importance of a return to the natural ways of the child. The stooping or squatting posture as-

sumed in the act of defecation is the physiological one in which every muscle is brought in to play and every mechanical means of pressure and force utilized.

To this end a modification of the closet stool was suggested by making the stool lower or by the use of a foot rest to flex the thighs.

The habit of modern dress depressing the transverse colon and crowding the abdominal and pelvic viscera down upon the rectum is one reason why females suffer more from constipation than males.

Improper diet enters very largely into the subject of constipation. The food problem especially among bottle fed children, is a difficult and as yet unsolved one. Indigestible, unclean, insufficient and improperly prepared food is conducive to constipation. Dietetics is a broad subject in itself, and can only be considered briefly in connection with treatment. If one were to undertake to enumerate all the systemic causes of constipation, he would hardly know where to begin and certainly he would have no end.

Constipation is more or less intimately associated with almost every form of disease, acute and chronic, either as one of the most common results, or as the direct cause. I will only mention briefly some of the pathological conditions together with the most common symptoms and quote Prichard's classification, viz.:

A. Organic impediments to peristalsis:

(1) Congenital malformations:

- (a) Atresia recti.
- (b) Imperforate anus.
- (c) Dilated colon (Hirschsprung's disease).

(2) Acquired structural alterations:

- (a) Dilated, convoluted, or lengthened colon from overfeeding or flatulent distention.
- (b) Inflammatory conditions of (i) peritoneum (peritonitis); (ii) bowel wall (results of long standing colitis), or dysenteric diarrhea; (iii) mucous membrane (inspissated mucus in chronic colitis).

B. Interference with nervous mechanism of peristalsis and defecation:

- (1) Organic (meningitis, hydrocephalus, tumors of brain and spinal cord).
- (2) Toxic conditions:
 - (a) Specific infections (fevers, etc.).

- (b) Specific poisoning due to drugs (opium, lead, excess of lime water, etc.).

- (c) Intestinal toxemias due to decomposition of food in the bowel.

(3) Exhaustion of nerve-centers due to overstimulation by:

- (a) Diarrheas.
- (b) Purgative drugs.

(4) Interference with the peripheral nervous mechanism by:

- (a) Hypersensitiveness of anal sphincter (fissure of anus).
- (b) Anesthesia of sensitive zone of rectum (by enemata, suppositories, presence of foreign bodies, etc.).

C. Faults in the intestinal contents:

- (1) Insufficient food (starvation, vomiting).
- (2) Deficiency of fluid (dehydration of tissues by fever, loss of blood, want of bile and intestinal secretions).

These conditions vary from simple hyperemia to catarrhal or ulcerative processes of the intestinal mucosa. The intestinal walls may become very thin, they may undergo fatty degeneration, swelling, distention, and inflammation, and induration and thickening of the walls frequently occur, especially in the region of the cecum. Atony resulting from loss of reflexes and consequent loss of peristalsis with dilatation, varying from partial to complete paralysis, is often present, particularly in the large intestine where the feces normally remain the longest in transit.

Spastic conditions are also of frequent occurrence. Hypertrophy and spasms of the sphincter ani is one of the most common of the symptoms. The general symptoms of constipation are languor, mental and physical depression, lack of memory, irritability, melancholia, indifference, headache, loss of appetite, nausea, vomiting, indigestion, vertigo, flatulency, abdominal pain and tenderness, tympanites, heart and respiratory disturbances, chlorosis, anemia, fever, convulsions—a long train of symptoms all more or less often seen alone, or in connection with general disease.

The picture is familiar to us all, for we see it daily. Systemic infection or autointoxication manifesting itself in so many of these symptoms is a most convincing proof of the powerful influence it must and does have over the normal functions, physical and mental. While it is not necessary for us in general practice to know the exact processes by which this particular condi-

tion comes about, it is sufficient to know that it exists, and that directly or indirectly it is dependent on the accumulation of toxins retained too long in the system largely as a result of habitual constipation. And herein lies another important branch of my subject which must be passed over with mere mention.

The treatment of constipation depends on conditions and causes. Obstructive constipation with its series of complications dependent on a mechanical hindrance to free intestinal drainage should receive palliative treatment only so long as is necessary to establish a diagnosis. Then it becomes almost exclusively a case for surgical interference, and the sooner it is thus recognized and treated the better. Permanent relief can only thus be obtained in cases of malformation and displacements, adhesions, bands, extensive inflammatory conditions with or without ulceration, abscess, or presence of tumors, etc.

Habitual constipation independent of mechanical obstruction or special lesions of the intestinal viscera is perhaps the most common form and the most important to the general practitioner, for associated with this condition is that long series of pathological complications so continually met with in our every day work.

The successful treatment of this condition is tedious, difficult, and often discouraging to patient and physician alike. It means perfect co-operation on the part of both. It means time and perseverance and probably a complete change from the customary habits and the irregular unnatural manner of living that has become most thoroughly established to a new, rational and physiological regimen.

If begun early in life, even before birth, it would be much simpler and far less difficult.

Correction of diet is perhaps the most essential and often that alone is sufficient. As has been mentioned in the discussion of the causes of constipation, lack of bulky food and the consequent small residue of fecal matter, lack of sufficient amount of liquids, together with the universal use of highly concentrated and highly seasoned food, are common causes of constipation and must be corrected. This does not necessarily mean a very restricted diet but a proper selection of food. Corn, rye, whole-wheat, or coarse brown bread, instead of the white roller process. Oat meal and cracked wheat instead of grape nuts; apple and prune sauce instead of preserves.

Three or four coarse vegetables each meal with meat and the other albuminous foods in moderation. An orange or grape fruit before the meal, milk or cocoa instead of tea or coffee, abstinence of alcoholics, a glass of water, preferably hot before eating, or some mineral water, and an occasional glass of water between meals. All foods known to disagree, of course, to be rejected.

Agar-agar is of great service in cases of constipation where there is over absorption of the liquid contents with dry hard feces. It is a kind of sea weed, a product insoluble, indigestible, resistant to the action of the ordinary intestinal bacteria, consequently, passes unchanged through the canal. It has a marked affinity for water. Taken in teaspoonful doses with the food once or twice a day, it retains the liquids and mixing with the feces renders them moist, soft and bulky. It is harmless, can be continued indefinitely, is useful in children as well as adults, and often gives excellent results.

Sour milk and buttermilk with or without sugar, two or three glasses a day continued for some weeks help to produce normal movements. Yeast is valuable also. The ordinary yeast cake can be used— $\frac{3}{4}$ of a cubic inch dissolved in a half glass of water once or twice a day.

The diet regimen in a word is intended to promote digestion and proper nourishment and supply the needs for the natural physiological processes of the stomach and intestines in performing their normal functions, especially encouraging peristalsis and preventing too rapid absorption and consequent dryness of bowel contents. The tendency to too great variety and the promiscuous mixing of foods in the stomach, especially of a concentrated and indigestible character is wrong. I hope our Montpelier friends will not take this suggestion too seriously whenever they again honor us with another of their elegant and delightful spreads.

The nursing infant is seldom constipated if it has a healthy mother or wet nurse. If there is an excess of proteids in the milk and lack of fat, constipation will occur. Reduction of meats and an increase of vegetables and fruit, and plenty of out-door exercise for the mother usually immediately corrects the error. Bottle fed children are not so easily controlled, usually a correction of an unbalanced ration will materially help. Cow's milk diluted once usually contains about 2 per cent. casein and 2 per cent. fat. This will

constipate almost any child. The percentage of fat should be doubled and sugar added until the stools become natural in form and consistency. Plenty of water is essential in connection with infant feeding. Gradually as age advances the proportion of milk can be increased and the mixed diet instituted including vegetables and fruit.

Hygiene enters largely into the subject of constipation.

Regularity in eating, resting and working, is essential. Recreation and out-door exercise also necessary. The meal should be heartily enjoyed instead of being made a part of the daily business. It should be a pleasant social event of the hour, taken in the presence of congenial companions and happy environment. Thus is appetite made keen, digestion easy, and all the functions stimulated to normal action. The morning cool bath followed by a brisk rub stimulates circulation, excites muscular tone, enervates the whole system, and makes one feel ready for the daily tasks, and the bowel functions respond accordingly.

Comfortable and proper conveniences for the toilet are essential. The cold, unsheltered, exposed privy so frequently in evidence, especially in the country, is often responsible for constipation among delicate women and children. The proper construction of the stool has been previously mentioned for the natural and satisfactory accomplishment of defecation, also the necessity of forming a regular habit of going to stool. The latter is particularly to be insisted upon among children, when first impressions and right habits are easily fixed. Food on entering the stomach immediately excites a peristaltic wave which extends along the whole length of the intestinal tract. The feces accumulated in the sigmoid are then carried into the rectum, there creating a desire for stool. Very young children can be taught to respond to this warning by being placed on the chair invariably at the same hour following the meal. The habit once firmly established is liable to continue through life to the inestimable advantage of the individual.

Rectal injections are indispensable but should not be used except to accomplish the immediate object. Long continued they encourage atony and chronic dilatation. They help to soften the hard dry mass and encourage its expulsion. The enema should be given with the patient lying down and with the aid of a soft rubber tube. The

normal salt solution, soap and water, or water with glycerine are good. Injections of oil or paraffin are highly recommended by some authorities when there is too rapid or over absorption of the intestinal fluids. This smears the mucous membrane with a thin impervious coat preventing absorption and consequent drying and hardening of feces.

Massage, electricity, hydrotherapy, and psychotherapy are used with variable success according to the skill and experience exercised in their application, but only of value in connection with other treatment.

Divulsion of the sphincter is sometimes necessary when constipation depends on hypertrophy of the muscle producing spasm. When immediate results are desirable it should be done under an anesthetic. In the more gradual process graduated soft rubber bougies are useful from No. 6 to No. 12 and 12 inches long. These dilate and at the same time excite peristalsis. Care must be taken not to injure the delicate tissues and produce fissure. Rectal suppositories may be used to advantage both in children and adults. This is of service in establishing the regular habit in the children going to stool. Inserting a small suppository of glycerine, soap, or gluten, a few times, or the use of the oiled paper cone, at the physiological, or psychological moment encourages the evacuation.

Suppositories are also of service in all cases of atony of the rectum and sigmoid, but should not be continuously used with the idea of curing constipation.

When indicated they are of use in relieving inflammation, irritability and pain in cases of piles, proctitis, etc.

It should be the rule to avoid the use of drugs as far as possible and they never should be long continued. In the beginning of the treatment of constipation they are often needed to secure a thorough elimination also in acute cases when immediate necessity calls for quick results, and in the preparation for a surgical operation.

The intelligent practitioner aims to more than merely secure one movement of the bowels by means of a laxative dose, but seeks to employ therapeutic means that give permanent results.

All drugs soon lose their desired laxative effect, if continued the dose has to be increased, the after effect is usually directly contrary to what is desired, and the tendency to constipation accordingly increased.

Medicine, however, has its place in the treatment of constipation and is often indispensable.

There are few better laxatives than water, cold or hot, taken freely and often.

The various mineral waters, because they encourage the inception of liquid, are of value and their medicinal properties are also of some value.

Aloes is perhaps one of the most valuable drugs, its effect being mostly confined to the lower bowel where action is usually most needed. Together with strychnia and belladonna, both of which stimulate peristalsis, we have an ideal combination for use in the initiative treatment of constipation.

Calomel to cleanse and produce antisepsis is of value, followed with salines, but should never be used in the general treatment of constipation, per se.

Castor oil, quick and effectual in emptying the intestinal tract of offending accumulations, is invaluable. The after effect is, however, decidedly constipating and cannot be long continued with good results. It is of service in small doses combined with equal parts of olive oil in conditions of alternating constipation and diarrhea.

Phenolphthalein is easy and effectual as a simple evacuent.

Cascara sagrada alone or in combination is one of the standbys. The U. S. P. comp. cathartic pill, compound liquorice powder, rhubarb, podaphylin senna, etc., are all of value when especially indicated.

The salines, especially the carbonate and citrate of magnesia, and sodium phosphate may be used with good results, and the longest, perhaps, without ill effects of any of the aperients. For decided quick effect magnesium sulphate is effectual.

Other more or less useful drugs might be mentioned if time would allow.

In the treatment of constipation per se we should not depend, however, on drugs. In their use, selection should be made of the one best fitted for the individual time and need. Use the dose required to secure the immediate desired result, then reduce it and discontinue altogether at the earliest possible moment.

The much that has been omitted in my paper is as important as what I have written. This I must leave for your own thoughtful consideration.

SOME COMMON RESULTS OF THE HIGH PERCENTAGE OF FAT USED IN INFANT FEEDING.*

BY

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Much has been written upon the subject of fat in the preparation of food for infants, yet it would seem that there is still a wide variance of opinion on this point.

I have often been impressed by results seen when children are fed without sufficient regard to the fat percentage. In many cases this no doubt is due to being unfamiliar with the percentage top milk method, or of the fat percentage of the milk used, which results in the physician prescribing a percentage mixture in which the fat content is much higher than he really intended. (I have frequently seen this mistake).

Quoting Holt, "The amount of fat of cow's milk which a healthy infant can digest varies considerably. The usual limits are between 1% and 4%. He says there are not many infants who can digest as much fat of cow's milk as the proportion often present in a good sample of breast milk. With most infants it is necessary to begin with as low a proportion as 1%. The increase should be made gradually. He has not found it of advantage to give fat above 4%, and in most infants not above 3.5%.

Holt also states that he constantly sees many cases with serious digestive disturbances caused by giving too high a percent of fat. He believes fat to be the element most often causing digestive disturbances in a normal infant.

Koplik says no infant should ever take over 4% of fat. Also that infants who are given a high percentage of fat may increase in weight up to a certain point, apparently thriving, then they will become pale, with constipated dry formed movements.

Grulee in speaking of the fats says that such large quantities of fat have been used in the usual cream mixtures that an effect anything but beneficial is produced in the infant organism.

*Read before the Research Club of the University of Vermont, Feb., 1913.

As the energy the infant obtains from the food comes largely from the fats and carbohydrates, there must be some fairly definite relation between them. Any reduction in one must be supplied by the other. By the whole milk method of Grulee, he advising $1\frac{1}{2}$ ounces of milk per pound body weight, we would seldom give above $2\frac{1}{2}\%$ fat, using the average 4% milk. Any more carbohydrates than that furnished in this amount of milk he gives in the form of malt sugar and starches, barley, oat-meal and the like.

Grulee says that too much importance cannot be given to the statement that it is the relative amount of fat and not the actual amount that is to be considered. He says it is sometimes a question whether it is the fat content in the infant's food or that the infant having a tendency to the exudative diathesis, predisposes it to a reduction of its tolerance for fat in even moderate quantities.

This statement is also supported by Kerley who says that an infant may not be getting over 2% of fat and yet suffer from fat indigestion.

What are some of the effects of high fat content in the food?

We continually have infants brought to us because they are vomiting a considerable portion of their food, this vomited food is sour smelling, often described as greasy, these infants may have but little desire for their food or they may take it ravenously and after emptying the bottle still be unsatisfied, sooner or later a portion at least of the feeding being vomited.

These infants are often constipated, only having a movement by the aid of an injection or a suppository. The stools of these infants may be of three different varieties as well described by Towle and Talbot.¹

1st. This form are soft and contain an abundance of soft curds which have been found to be composed of fat in the form of fatty acids and soaps. These curds look like small particles of undigested milk imbedded in mucus, which is generally more or less green.

2nd. The so-called "soap stool" is of light yellow or whitish color, has a slimy surface, a soapy appearance and is almost entirely composed of fat.

3rd. This is the least common form, a stool composed mostly of fatty acids which present an appearance not unlike indian meal.

We often see an infant with constipation given more cream in its food or olive oil given to overcome the constipation. It would seem evident however that the method would not be adapted to these cases cited as they could but aggravate the condition.

Cannon's work on animals has practically demonstrated that an acid reaction of the pyloric end of the stomach causes the pylorus to open, also that an acid reaction in the duodenum causes it to remain closed.

After milk enters the stomach it becomes separated into curds and whey. This whey, containing the carbohydrates readily becomes acidified and passes the pylorus first. The proteid passes out second, requiring longer than the carbohydrates to acidify. The neutral fats and fatty acids pass out slower because it requires a longer time for them to be neutralized in the duodenum, the pylorus remaining closed longer. This fact explains why a mixture with a high fat percentage would require a longer time before the stomach becomes empty. I might here cite an instance supporting this view. In an infant who had previously had fat indigestion, during a recurrent attack vomited some quite hard rubbery masses, resembling those described as curds formed in the stomach of an infant when cow's milk is taken. This vomiting was nearly $2\frac{1}{2}$ hours after nursing. On analysis these masses were shown to contain 34% fat.

Recently I have been attempting the method of feeding followed by Grulee, i. e., 4 hour intervals, 6 feedings with good results. The reason for this being as he describes that it allows the stomach time to empty itself. We will say approximately three hours for the bottle fed infant. Then we have an interval of one hour for the stomach to rest. With this method when the next feeding is taken the stomach will be empty ready to receive it. On the other hand if we follow the method of feeding every two hours the food is taken into the stomach which has not emptied itself of the previous feeding. This would especially be true were we feeding a high percent of fat. When the infant is breast fed this method allows the breast to become well filled so that infant gets a low percentage of fat. Another advantage is that the mother having a longer interval of rest between nursings the supply tends to increase.

Montgomery and Culver² believe the skin in its natural functions uses large quantities of fat and that the kind and quantity of fat furnished to the skin is of vast importance to its health. They also think that the quantity and quality of the fat ingested does not act directly as a poison but that it lowers the resistance and increases the susceptibility to bacterial action rendering the individual liable to have acute eczema, furuncles, carbuncles and erysipelas.

A condition which seems to follow this same line and closely related to fat metabolism is that described by Czerny as the exudative diathesis:

This is a congenital condition which may affect all the members of a family. There may be no demonstrable signs present during the first few months of life then marked signs of an eczematous condition may develop. This tendency is exaggerated in nervous infants, also by uncleanness and by giving a food with a high fat content. Czerny describes two types of infants commonly affected. One is the fat robust child who seems normal. The other a pale congenitally delicate infant. These infants seem to have a natural intolerance to fat while on the other hand they seem to readily assimilate starches. An eczema of the face is most common. Bearing this fact in mind when we are confronted with an infant with a persistent facial eczema may be material assistance in its treatment.

Stools: One very important detail in feeding infants is often entirely overlooked or intrusted to the judgment of the nurse or mother, that is the examination of the infant's stools.

Much may be learned from the stools relative to the infant's digestion and I want to especially impress this upon your minds.

I wish to report briefly three cases which bear out my previous remarks.

CASE 1. Boy, born at term, seemed well developed and normal. He was put to the breast for a few days after which time the breast milk failed and he was given a top milk mixture, the exact percentage not known, he did fairly well for a short time then he began to have vomiting spells and became very constipated. As a relief for the constipation a rich top milk was ordered. The condition, however, grew worse. When I saw the infant he was vomiting a considerable amount of his food. It was sour and offensive. The move-

ments were large and contained many fat masses with mucus. This boy was having repeated recurrences of furuncles about the scalp, at one time having thirteen. He had lost much in weight, the tissue turgor reduced, he was pale, the skin wrinkled and somewhat inelastic, in fact he was on the border of decomposition. A reduction of the fat in his food was all the treatment needed for a gradual return to the normal.

CASE 2. Boy born at term, he was well developed and nourished, birth weight 8½ lbs. He was breast fed for about four months at which time he weighed nearly 17 pounds, at about this time he began to lose in weight, was fretful and the milk being considered at fault he was put on artificial food, a top milk mixture with a patent food being given. He began to vomit after his feedings, the vomitus being described as sour and greasy. He became very constipated and suppositories were required daily. His condition when I first saw him, about six weeks after artificial feeding began, was as follows: Weight 14¾ lbs., the skin and mucous membranes were pale. He was unable to sit up as he had previously done, tissue turgor reduced, muscles flabby, reflexes normal, liver normal, spleen slightly enlarged. There was a marked ammoniacal odor to the urine. There was considerable flaring of the lower border of the ribs, a slight rosary was palpable, the circumference of the head was 17½ inches, that of the chest 16¼ inches, in fact rachitic changes were developing. He was crying almost constantly, took his food ravenously, and was not satisfied when the bottle was emptied. He was vomiting considerably after feedings. The stools seen at my first visit were full of fatty masses with mucus, the whole being of a decided greenish color. This is typical of the stools described as No. I in my previous classification. The diagnosis seemed quite evident. Fat indigestion and fat constipation in all probability caused by a high percentage of fat in his food. Upon analysis of a sample of the food as it was being prepared for this infant we found the following: Fat 5.44%; carbohydrates 4.44%; proteid 1.05%; salts .2%. This of course confirmed the diagnosis. Treatment: Barley gruel was given at three hour intervals for twenty-four hours, then he was given 12 ounces skim milk (fat 1%) and water 24 ounces. Six feedings, six ounces each, the vomiting was nearly

controlled within thirty-six hours and the movements were much improved and he slept better and seemed comfortable. The skim milk was gradually increased to twenty-six ounces, and dextri-maltose gradually added so he was getting one and one-half ounces in each twenty-four hours' feeding. He is now making a gradual gain in weight but most important of all his tissues are becoming firmer and he is sitting up some at this writing (26 days from my first visit). The point that I wish to impress on you is that the boy needs proteids and that he will not tolerate much fat. The 26 ounces of milk gives him 3.5 grammes of proteid per kilo of body weight which is ample for his needs.

CASE 3. Female, first child of healthy parents, delivered at term, labor normal, birth weight $8\frac{3}{4}$ pounds, she cried well and seemed normal. The mother was unable to or at least did not nurse her. She was given a milk and cream mixture (percentage unknown). She vomited immediately after taking the food, she was then given the top, two ounces, from a quart of milk, milk sugar one dram, water ten ounces. This gives fat 3.8%, carbohydrate 2%, proteid .5%. The vomiting with constipation continued, next Horlick's malted milk and cream was given, after this she took the following mixtures, Mellen's Food with whole milk, milk sugar and lime water (the lime water in this mixture was 50% of the milk content so no curd would be formed in the stomach). Milk and milk of magnesia was used, whey, then boiled water alone. Seven weeks were necessary to go through the list.

This infant came under my charge May 17th, she was seven weeks old and weighed $8\frac{1}{4}$ pounds. She was pale and poorly nourished, tissue turgor reduced, muscles flabby, fontanel slightly depressed, she was vomiting at intervals although nothing but water was being given. The heart and lungs were normal. The abdomen was distended with gas. She was very irritable, crying continually, a typical cry of hunger. The bowel movements were dry and showed fat and mucus.

Diagnosis: Fat indigestion and constipation due to a high percent of fat in her food.

She was given a mixture with fat 1%, carbohydrate 5%, proteid 8%, dextri-maltose being used. This food was well taken and very little vomited during the next twenty-four hours. By the third day she was retaining all her food ex-

cept an occasional mouthful regurgitated. She had two quite well digested stools on this day.

June 6th her food was increased to fat $1\frac{1}{2}\%$, carbohydrate 6%, proteid 1.25% with barley gruel as a diluent. Changes were made gradually from that time and on Sept. 1st she was taking whole milk 30 ounces, water 8 ounces, dextri-maltose $1\frac{1}{2}$ ounces. Her weight chart showed the following: May 17th, $8\frac{1}{4}$ pounds; June 10th, $9\frac{1}{4}$ pounds; June 16th, 10 pounds; June 23rd, 11 pounds; June 30th, $11\frac{3}{4}$ pounds; July 22nd, $13\frac{3}{4}$ pounds; July, 29th, 14 pounds; Sept. 1st, 17 pounds.

Since that date she has done well except on three occasions the fat percent was raised beyond her point of tolerance and vomiting occurred. This being at once reduced was all the treatment required. This case requires no comment.

We could with profit remember the dictum "The more haste the less speed," as this would certainly apply in these cases.

Case 2 has one point somewhat contradictory to a quite general opinion, that an infant fed on a high fat percentage would not develop rickets. One theory that Birk has advanced would seem to apply to this case. That is the large amount of fatty acids in the intestines withdraw calcium salts from the system in the process of forming soaps. This causes a relative acidosis with a high ammonia content of the urine.

You will notice that the deductions from my cases are in accord with those drawn by Mr. Jones³ in his report of the exhaustive study in feeding baby pigs. These are that proteid is the most important element for growth and that a comparatively low fat percent is desirable.

In closing I wish to express my thanks to Mr. C. H. Jones for his valuable assistance in analysis work in connection with my cases.

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In treating an intractable, freely-discharging urethritis, always bear in mind the possibility of urethral chancre.

CARDIAC DISEASE WITH ESPECIAL REFERENCE TO TREATMENT.*

BY

DR. JOHN P. GIFFORD,
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This paper has nothing to do with the etiology of heart disease. It has nothing to do with physical examination. It has nothing to do with details of symptomatology. It has nothing to do with prognosis or diagnosis. I have just tried to pull together enough of the general symptoms, enough of the physiology and enough of the pathology to form an intelligent basis for the reason of using medicinal remedies in the treatment of cardiac diseases and, if we decide to use a medicine or combination of medicines, establish a platform upon which we can stand and defend their use.

The general symptoms of cardiac failure may be divided into two groups:

(1) Those symptoms due to congestion of the pulmonary capillaries, viz.: cough, dyspnea, cardiac asthma, pulmonary edema and hemorrhage. All these are due to weakness of the left ventricle. A strongly acting left ventricle throws more blood into the aorta and arteries, and this blood must first be drawn from the left auricle and pulmonary circulation. So that if the output from the left ventricle is normal or above it will use all the blood that the right ventricle pumps into the pulmonary artery, and no engorgement will take place. A weakly acting left ventricle over fills the lungs with blood while a strongly acting left ventricle bails them out. The whole of pulmonary engorgement then is a problem, not of the right ventricle but of the left, and as weakness on the part of the left ventricle is responsible for symptoms of pulmonary engorgement so weakness on the part of the right ventricle is the cause of engorgement in the systemic veins which engorgement is back of the second; (2) group of symptoms viz.: edema, ascites, renal engorgement, swollen liver, etc.

Let us consider for a moment the lesions of the left side of the heart. In mitral insufficiency, the most common of all heart lesions, the only hope of the victim lies in the ability of the left ventricle to increase its function and to maintain an increased function. As long as the left

ventricle is sufficiently vigorous there are no symptoms. When it begins to fail we get pulmonary engorgement with its symptoms, and, as a result of stasis in the lungs an increased work thrown upon the right ventricle. When the right ventricle on account of increased work begins to fail, the blood begins to stagnate in the systemic veins. As a result they dilate, changes take place, and edema soon follows in the feet, later in the shins, thighs, genitalia and back. With the onset of these manifestations the shortness of breath becomes extreme, a dyspnea of the nerve centers due to increase of CO_2 in the blood is added to that of the pulmonary engorgement.

The patient is compelled to sit up all the time gasping for breath, occasionally with paroxysms of real cardiac asthma, and palpitation, sometimes with pain in the heart, severe cough with expectoration of sputum which contains cells loaded with blood pigment. The urine becomes scant and loaded with albumen and casts, ascites and hydrothorax may set in and thus slowly the patient succumbs to the disease which was at first a leak in the mitral valve but at last a weakening and dilatation of the left and right ventricles.

In mitral stenosis we have about the same symptomatology but the pathological physiology differs in that no strain is put upon the left ventricle but there is greater tendency to engorgement of the pulmonary system with increased work on the right ventricle, dilatation, systemic engorgement, etc. With aortic insufficiency there is no effect upon the pulmonary circulation as long as the left ventricle is acting powerfully. When the left ventricle begins to fail then pulmonary stasis occurs and subsequently failure of the right heart as in mitral insufficiency.

In aortic stenosis the call for work upon the left ventricle is greater than before and its failure produces the same vicious circle as previously.

Primary lesions of the right side of the heart are rare but secondary incompetence or that due to diseases of the left side of the heart is very common.

None, however, needs separate mention except the insufficiency of the tricuspid valve due to dilatation of the right ventricle and occurs in every heart failing from valvular lesions.

No discussion of the pathological physiology leading up to the treatment of cardiac failure would be complete that did not consider briefly,

*Prepared for the Washington County Medical Society by Dr. John P. Gifford, Randolph, Vt.

at least, hypertrophy and dilatation of the heart. All relief of a broken compensation depends upon a beneficent hypertrophy or prevention of a dilatation or overcoming a dilatation already present. To enable the heart to recover from an overstrain and the consequent dilatation, to maintain the circulation in the presence of a valvular lesion or to reestablish a compensation once broken the heart must put forth an increase in force. Without going into the subject of different types of hypertrophy, I will say that nature has seemed to provide so that whenever the heart is subjected to an abnormal strain, especially as a result of valvular disease, it hypertrophies and increases in size to dimensions sometimes enormous. A certain amount of hypertrophy is necessary whenever a valvular lesion or other abnormal factor tending to increase the work of maintaining the circulation is present. Hence failure of the heart to hypertrophy under these conditions would be an unfavorable situation and would soon be associated with ill health.

The stimulus for hypertrophy seems to lie in the increase of residual blood in the ventricle which when of moderate degree acts as a slight increase of load upon the heart muscle and this tends to increase the irritability and force of contraction, and, particularly, to bring about an increase in tonicity. This works well up to a certain point, when the increase in load is too great and then we get the opposite effect, the contraction becomes weaker, and there is a decrease in tonicity, and, consequently a condition favoring dilatation of the ventricle instead of hypertrophy.

Tonicity is the resistance to dilatation of the heart muscle in diastole. And as medicines have quite considerable effect to increase the tonicity I shall dwell upon this subject a little longer. During the period of diastole the heart muscle is quiescent and the heart wall relaxed. As there is no muscular action at this period the degree of diastolic relaxation will depend upon the tonicity of the heart muscle. The force which stretches the heart muscle in diastole is the force with which the blood enters the heart from the great veins, namely the venous pressure. So that with a high venous pressure unless antagonized by a high tonicity the ventricle walls will be stretched considerably. In all cases filling will continue until an equilibrium is reached between the venous pressure and the cardiac tonicity. A high tonicity will antagonize an overfilling of the

ventricle. A low tonicity is equivalent to a high venous pressure and favors dilatation. So, it is obvious that the question of increasing or maintaining good tonicity is of paramount importance in the medical treatment of the heart. Experiments by numerous investigators have shown that the administration of digitalis, strophanthus, nitroglycerine, calcium salts, strychnine, increases cardiac tonicity.

In every effort to conserve the energy of the heart the question of the rate of the heart beat must receive consideration. Normally the ventricles empty themselves during systole and begin to fill as diastole begins. The ventricles are filled at a rapid and uniform rate, but if the pulse rate is too rapid the next systole begins before the ventricle is completely filled thus diminishing the output of the ventricle. If, on the other hand, the beat is too slow, the filling takes place at the same rate and the ventricles are filled before the systole begins. Here is a lost space of time between the diastolic filling and the systole called the diastasis. The greatest amount of output in a unit's time occurs when the beat is at a rate which just allows the diastolic filling to be complete, i. e., at a rate that is neither too rapid nor too slow. In accordance with this physiological consideration we have an opportunity to aid the circulation of blood by medical means. This consists in applying remedies to either quicken or to slow the beat as the case may need.

The rate of the heart beat is determined by the action of the vagus and the accelerator nerves. Stimulating the vagus slows the heart. Stimulating the accelerator quickens the beat. Here again medicinal treatment has some show of success because digitalis, strophanthus, aconite, strychnine, caffeine, veratrum, muscarin will slow the heart action by stimulating the vagus, while atropine, cocaine and the nitrites will increase the heart rate by paralyzing the vagus. Adrenalin and the nitrites will stimulate the accelerator nerve.

In the treatment of cardiac diseases by drugs there are some other problems which must be considered. Important among these is the condition of the heart muscle, the condition of the peripheral vessels. We have seen that valvular lesions produce hypertrophy of the heart by increasing the load in the ventricles. Other conditions lead to hypertrophy as the hypertrophy of nephritis, hypertrophy of arteriosclerosis. The tendency of hypertrophied heart muscle from

whatever cause is to degeneration, fibrous tissue taking the place of muscle tissue. This cardio-sclerosis is liable to occur in those hearts which have been subjected to long continued dilatation, frequently in hearts in which hypertrophy preceded dilatation.

The remedies which act directly upon the heart muscle increasing its irritability, force of contraction and tonicity are digitalis, strophanthus, strychnine and caffeine.

The heart may be laboring under too great peripheral resistance as in arteriosclerosis or stimulation of the vasomotors by certain poisons of a chronic nature. Or it may be running wild and wearing itself out pumping into dilated blood vessels as in paralysis of the vasomotors in fevers or shock. The drugs which act as constrictors upon the peripheral blood vessels are camphor, strychnine, adrenalin, ergot, digitalis and caffeine; as dilators, amyl nitrite, nitroglycerine, sodium nitrite, erythrol tetranitrate.

So here is our list of drugs arranged in a table. This is a copy of Hirschfelder's classification in his excellent book on diseases of the heart and aorta. After studying the pathology of a given case and finding out what a certain heart most needs it is a matter of science, experience and art to apply the remedy or combination of remedies which would best suit the conditions not only of the heart but also of the person who is the possessor.

But always the condition of the heart muscle, the condition of peripheral vessels, the condition of hypertrophy, the condition of dilatation, rate of pulse, broken pulmonary compensation, broken systemic compensation, these and other things should receive our earnest consideration before the prescription is written or treatment advised.

He who prescribes digitalis, strychnine or the nitrites because they are reputed to be heart remedies or in a routine way does not do his duty by his patient.

There are few drugs that are more useful to the practitioner than digitalis, and there are few if any that require more care and study for its administration. In most any cardiac lesion where compensation is broken and this means, that you have a weakness on the part of the right or left ventricle or oftener both, digitalis is indicated. It is useful:

(a) To slow the beat of the heart.

(b) To increase the tonicity of the cardiac muscle.

(c) To act directly upon the muscle itself.

(d) To tone up the vasomotors or to increase the blood pressure. This action of digitalis would seem to be indicated in all cases of insufficiency of the mitral and tricuspid valves. If you wish its actions minus the increasing the blood pressure you can choose between substituting strophanthus or combining digitalis with the nitrites. By effecting this combination not only is the constrictor effect of digitalis done away with but there is an added effect of the nitrites in increasing tonicity. So at times these two drugs are very happily combined.

I would not use digitalis (1) When rapid action is needed. Here I would use strophanthus, or better, strophantin intravenously. (2) In cases of great myocardic degeneration, and in cases of aortic insufficiency and mitral stenosis where the peripheral resistance should not be increased.

There is a diversity of opinion among authorities in regard to the action of strychnine. Strychnine has had a widespread and I think rather indiscriminate use. There seems to be evidence of its having considerable usefulness in respiratory embarrassment, in cardiac asthma. Its action is as a stimulant upon the respiratory centers. Also useful to tone up relaxed vascular system in heart failure from fevers.

Camphor, like strychnine, is a stimulant to the vasomotor system. Its great use seems to be in surgical shock.

Caffeine has much the same action as digitalis except that it does not constrict the coronary arteries. It does bring about a constriction of the peripheral blood vessels and is regarded by some investigators to be more reliable than camphor and strychnine in collapse and shock.

Aconite has a decided action and a useful one when used alone or in combination with digitalis. It stimulates the vagus and produces slowing of the pulse beat. Therefore, useful whenever the heart needs slowing. If the heart muscle needs stimulating at the same time, combine with digitalis.

There are four useful nitrites. In therapy the nitrites are of a good deal of importance. They bring about a marked vasodilation and thereby diminish the resistance of the blood flow and lessen the load of the heart. They do not, however, seem to have the effect on the coronary artery as has been supposed from their efficacy in angina pectoris.

The action of amyl nitrite is rapid, 1-5 minute periods. Nitroglycerine, 7-20 minute periods. Sodium nitrite, 15-25 minute periods. Erythrol tetranitrate, 30 minutes to 3 hours.

I will also make mention of potassium iodid which is not in the list. This remedy is very widely used in arteriosclerosis and it certainly produces clinical results. Its modus operandi is unknown and it is still classed as an alterative.

In this paper I am unable to more than make mention of rest and quiet, which I consider at times to be more valuable than all medication, uses of cold application to the cardiac area, venesection, diet, purgation, gymnastics, Shott exercises, hydrotherapy, all of which are important considerations and many of which are scarcely less useful than the drugs mentioned.

Also I am unable to go into the preparation of the drugs and their dosage. This, too, is scarcely secondary in importance. I must leave the subject in a sadly unfinished state and I do so with hopes that the discussion will bring out many point untouched upon.

It has always seemed to me that considering its importance this whole subject of cardiac therapy has received very little attention. The subject of its pathology has received its share of attention, but in matters of treatment very little has been added to what Niemeyer presented 40 years ago.

I will close by urging an effort on the part of practitioners to an earlier diagnosis of cardiac insufficiency. For an earlier diagnosis gives a chance for a physical reeducation. The processes of hypertrophy after a valvular lesion require time and it is during this stage when the patient is free from symptoms that he should be under reasonable supervision as to exercise and rest. Again it is hardly a fair deal to treat a case for attacks of bronchitis or asthma for months or years and only wait until after systemic compensation is broken with the development of dropsy before deciding he has heart disease. Also many cases are treated for indigestion, nervous dyspepsia, biliousness, not to say gall-stones and cancer of the liver, who are in reality suffering from systemic incompetence.

I think by greater care and earlier recognition of the true cause of distant symptoms the practitioner has it in his power to do much to conserve the heart and put far off the day of the second and third or terminal stage of the disease.

MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION.*

The Proposed Change of Name.

GEORGE H. SIMMONS, M. D., LL. D.

Chicago.

I have been asked to discuss the present conditions of membership in the American Medical Association and the proposed change, which has been under discussion recently. While this is not directly related to the object of this conference, the discussion of uniform regulation of state membership, it is so closely connected with it that I cannot refuse to take advantage of the opportunity of discussing the question before such a large representation of state secretaries.

To get a clear understanding of what the present term "members" of the American Medical Association means, it is necessary to go back a little in the history of the Association.

The American Medical Association always has been a delegated body; only "delegates ever had a right to take part in its proceedings.

"Permanent members" was a term originally applied to those delegates who connected themselves permanently with the Association after they had served as delegates. "Permanent members," however, had no rights except those of attending the meetings and taking part in the scientific work. In 1883, *The Journal* was started and the following year, for the purpose of increasing the circulation of *The Journal*, there was created another class: "Members by Application." A member of any so-called affiliated society could become a "member by application" simply by making application for membership and paying the annual dues. The difference between "members by application" and "permanent members" was that the latter had been delegates, whereas the former became members sim-

*EXPLANATORY NOTE:—This abstract of an address before the Conference of State Secretaries is republished from the American Medical Association Bulletin of Nov. 15, 1912, on the request of the judicial council. The house of delegates referred the report of the committee to formulate amendments to the Constitution and By-Laws to extend membership, presented at the 1912 session (*Journal*, June 15, 1912, p. 1899) to the judicial council with power to confer with constituent associations. The council, after careful consideration, endorses the proposed change and takes this means of bringing the subject to the constituent associations as well as directing to it the attention of the members.

ply by making application. Neither "permanent members" nor "members by application" had vote or voice in business meetings.

MEMBERSHIP IN THE A. M. A. TODAY ON THE SAME BASIS AS THE FORMER "MEMBERS BY APPLICATION."

Briefly, we have the following situation:

1. The voting membership of the organization is the combined membership of all the 2,000 (more or less) component county societies, amounting approximately to 70,000 members. These elect the delegates to the House of Delegates of the state associations; they in turn elect the delegates who form the House of Delegates of the American Medical Association. Before 1901 the delegates to the American Medical Association were elected, or appointed, by the "affiliated" societies, which included local, district and state societies. Since 1901, that is, since the reorganization, the delegates to the national body are elected not by local, district and state societies, but by the state societies alone.

2. The so-called "members of the American Medical Association" are the direct successors of the old "members by application." By their payment of dues and their subscriptions to *The Journal*, they were and are today the supporting or contributing group of the members of the organization.

3. The House of Delegates is composed of approximately 150 members, who are elected by the various state Houses of Delegates, which are in turn composed of delegates elected by the members of the component county societies. The House of Delegates of the American Medical Association, therefore, is created by, and represents the combined membership of all the county societies of all the states; it is not elected by, nor does it represent, the present "members of the American Medical Association" as such; it never has.

The result is that we have two classes which could be called members. First, the actual, logical memberships of 70,000, usually designated as "the membership of the organization." Second, the 36,822 contributing or supporting members, who are designated as "members," although these "members of the American Medical Association" have no more privileges than have all members of the organization, except the right to take part in section work. This present situation I have had shown on the accompanying chart

(Chart 1). The membership of the American Medical Association, at present 36,822, is an inner circle of the membership of county societies, while the House of Delegates is a still smaller circle composed of those who have been elected to represent the members of the organization of the whole country.

Now the situation itself is perfectly logical and is in every way to be commended. The trouble is that we have not named our groups accurately. Those whom we now call "members of the American Medical Association" are really those members of the organization who, in addition to supporting their county and state associations, also contribute to the support of the American Medical Association, while for the actual membership of 70,000 members we have no distinctive name.

The change that has been proposed is not a change in condition at all. It is simply a change in name. It is proposed to designate the 70,000 members included in the large outer circle (Chart 2) as "members of the American Medical Association," which they really are and always have been, while those included in the inner circle (that is, those members in good standing of their county and state societies, who also pay \$5 a

The Present Situation



CHART 1.

year to support the work of the American Medical Association) are to be called "fellows of the American Medical Association" instead of "mem-

bers." This will make no change in the membership standing or relations of any man. If this suggestion is adopted, all members in good standing in their state organizations will be designated as "members of the American Medical Association," while those members who contribute \$5 a year to support the work of the Association will be designated as "fellows of the American Medical Association." In other words, those who are now known as "members" of the American Medical Association will be known as "fellows" of the American Medical Association, while the term "members" will be applied to the entire, combined membership of the component county societies of the whole country.

This plan has several advantages. In the first place it will give us a name for the entire membership of the organization, which we have never had before. Before 1901 they were referred to as members of "affiliated" societies, and since then they have been called, for lack of a distinctive name, "members of the organization." Another advantage will be that it will make clear that the voting power lies with the 70,000 members and not with the 36,822 "fellows." When this plan was first proposed, some got the impression that the intention was to compel the 70,000 members of the county societies to become "supporting members" of the American Medical Association, as the term is now understood. This, of course, would be a ridiculous proposition. The proposed change contemplates leaving membership conditions exactly as they are, it contemplates changing the name, and not the relation.

One great disadvantage prior to the reorganization of the American Medical Association in 1901 was the fact that we had no name by which to designate the delegates. As soon as the name "House of Delegates" was adopted, then the function of the delegates became clear at once. The Association also has labored under the disadvantage, ever since its reorganization, that there has been no name by which to designate the actual voting membership, because the term "members" had been applied to the supporting body. The proposed change simply recognizes this fact, designating as "members" those who really are members, and designating the supporting members as "fellows."

I have already given some reasons for making the change, but there is another and more important; in fact, it is the paramount reason. Up

to the present time, the members of the organization have not realized that they are, in reality, members of the American Medical Association. They regard the American Medical Association as something entirely apart from them, something in which they have no interest. These members of the organization are through their elected representatives responsible for what the American Medical Association is doing, or what it ought to do and is not doing, but they do not realize this, hence they are not interested. They do not appreciate that the House of Delegates of the American Medical Association, which they elect, is the body that is doing the work through the officers, trustees, councils, etc., which they, through their representatives in the House of Delegates of the American Medical Association, select. While only a change in name, I think the subject is of the utmost importance. I hope that all of you will look into it carefully.

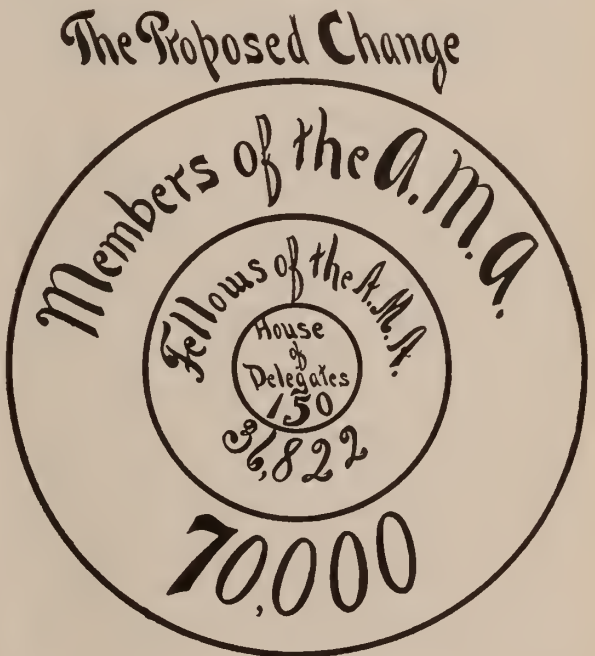


CHART 2.

so as to understand exactly what is intended, and then will explain it to your members at the first opportunity.

Cardiac troubles are aggravated by large doses of the following drugs: Iodine, acetanilid, aconite, belladonna, bromides, chloral, hyoscine, sulphonal, trional and veratrum.

Vermont Medical Monthly.

*A Journal of Review, Reform and Progress in the
Medical Sciences.*

H. C. TINKHAM, M. D., }
B. H. STONE, M. D., }*Editors.*

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EDITORIAL.

Perhaps no development of curative science has excited so much public attention as the so-called Friedmann treatment for tuberculosis. Some part of this may be due to the universal world-wide agitation of anti-tuberculosis campaigns. But a study of the history of like events shows that a large part of it is due to our national tendency to become hysterically enthusiastic over anything new; our exalted value of anything which bears the stamp "made in Germany" and the remarkable avidity with which our newspapers seize and make the most of anything which promises to be news. This is particularly unfortunate in a matter of so much importance and one which so vitally affects so many people as a treatment for this disease. The effect of these methods of exploitation are bound to react on the treatment itself and in time counteract largely the good which there may be in it. Thus, we know that Koch's original tuberculin treatment suffered so much from the effect of the exaggerated belief

in its curative power; a belief, by the way, in no way fostered by the actual claims of Koch himself, that the whole subject of bacterial therapy was retarded fifteen years. From the newspaper accounts of this remedy, one gets the impression that Dr. Friedmann himself is not averse to this premature notoriety but that he actually employs a clever press agent or is himself one. His attitude appears to be slightly quackish and is certainly tinged with personal considerations. Refused professional recognition in his own country, it would seem that he, remembering the experience of Lorenz and others, has turned a longing eye towards the land of dollars and is quite willing to have his remedy investigated here knowing that by this advertisement, he will be bound to reap many pecuniary benefits before any official results one way or the other, can possibly be obtained. The bare faced commercialism with which, after selling his right to the method in Russia and the British Empire for a million dollars, he enters in negotiations for a like sum in the United States, is so at variance with the principles of American medical ethics that it is not strange that the profession in America looks askance at the man and the method. These impressions are based largely on newspaper reports and may be as false as the report which makes him say of his treatment, "It is very simple, it is a serum and one injection drives all signs of tubercular germs from the system" and the report which comes as a special cablegram to New York, stating that Dr. Friedmann said: "No matter what the stage of the illness may be, I will give any patient one or two injections of my serum and six weeks later he will qualify as a strenuous football player." Statements absolutely ridiculous on the face of them to any one at all acquainted with the immunology, but which may do a great deal of harm by falsely raising the hopes of many sufferers and their

friends and prejudicing the minds of many naturally fair-minded physicians. The newspaper attitude that the American medical profession is unfair to a foreign scientist and has from motives of jealousy prevented the exploitation and sale of this treatment while probably inspired by a desire for fair play shows great ignorance of the matter and gives an absolutely wrong impression to the public, and is a grave injustice to a great profession. Dr. Friedmann although attempting secrecy has been obliged to admit that his treatment consists of a living culture of a germ from human sources which has been passed through the turtle and become according to his statement, thus non-virulent. It is highly proper that the medical profession and boards of health should demand unrefutable proof of the harmlessness of such a culture before its promiscuous distribution is allowed. The proof which Dr. Friedmann submits on this question is entirely inadequate. That virulence often recurs in cases of tubercle bacilli the same as other pathogenic bacteria is a well known fact. Human cultures after seven years have been known to recover this virulence. Passage of the mammalian or avian type through a cold-blooded animal frequently causes a disappearance of virulence which is, however, not permanent. Thus Dunbar found that he could adapt the human type to become pathogenic for fish at the same time losing its virulence for the guinea pig, but he was afterwards able to restore the virulence of the recovered culture. Other like experiments have been produced by the use of the frog, fish and turtle. There is nothing new about the principle of the treatment which Dr. Friedmann offers. It is simply a slight modification of Koch's original treatment. Nor is there anything new about this modification. In 1892 and 1893 Trudeau of Saranac Lake demonstrated the fact that subcutaneous inocula-

tions of living cultures of avian tubercle bacillus, greatly increased the resistance of rabbits against infection of the virulent mammalian cultures. Dr. Trudeau was perhaps the first to announce the principle that living cultures should be used to produce an efficient immunization against tuberculosis. Deuechweinitz in 1894 immunized animals with living human tubercle bacilli which had been cultivated for twenty generations on slightly acid broth. At the end of this time, cultures were not virulent for guinea pigs, but were capable of immunizing these animals to such an extent that they resisted infection with the bovine germs while control animals died in seven weeks. This is the principle in the bovo-vaccine of Von Behring. There are certain American investigators whose work gives the impression of more thoroughness, greater care, greater caution and greater conservatism and which is free from all commercialism and the evidence of desire of personal gain and advertisement and from all notoriety seeking. Dr. Van Ruck has done work along this same line and and yet no one outside the students of modern medicine know it. His results are apparently as promising as are these of the German yet he is very cautious in making claims and disclaims any effort at newspaper notoriety. Friedmann has the distinction of being the first who has dared apply this treatment to the human being and while we should watch the results with all fairmindedness and should attempt to put from us as far as possible, the bad impression made by the obvious commercialism and the apparent lack of scientific proof, it is highly proper that we should demand most conclusive evidence of the harmlessness of the cultures used and, in view of the great notoriety which has been given the treatment with the apparent consent if not active intent of the promoters, it is in no way unfair to demand official proof

of the truth of his claim regarding its curative effect especially as his own medical confrères have refused to accept it.

The University of Vermont College of Medicine is equipping a free dispensary in rooms provided by the directors of the Mary Fletcher Hospital. This was made possible by the appropriation which was made by the last state legislature to the University of Vermont College of Medicine to be used for the development of facilities for clinical teaching.

The dispensary will be thoroughly modern in every way and service will be given in each of the various departments of medicine and surgery. The dispensary will be under the control of the College of Medicine and each department will be under the supervision of the professor of that subject. It will be open every day except Sunday and several departments will be in operation at the same time each day. A laboratory for the examination of pathological specimens of all kinds is being equipped with apparatus and microscopes, and a pharmacy is being installed where prescriptions for dispensary patients will be put up. A graduate pharmacist will be in attendance.

This will solve one of the greatest problems the College of Medicine has had to meet—the securing of clinical material.

The dispensary should provide a very large number of cases for study and with a good classification of cases and good records it will form an invaluable adjunct to the facilities for clinical teaching.

While the dispensary will serve the College of Medicine by bringing in a large amount of clinical material it will also serve the poor people of Burlington and the state by furnishing them free professional services and also medicine free.

The University of Vermont College of Medicine has secured another very important arrangement. The directors of the Mary Fletcher Hospital have given a written agreement whereby the College of Medicine has much freer access to the hospital wards. A large percentage of patients will now be admitted as clinical cases and will be available for clinical teaching under the direction and control of the College of Medicine. This will materially increase the number of clinical patients. This large increase in the amount of clinical material is very gratifying as it meets the most severe criticism that has been made of the University of Vermont College of Medicine—insufficient clinical material for satisfactory teaching.

Another very important thing that has been made possible by the appropriation to the University of Vermont College of Medicine by the last state legislature is the establishment of a free maternity ward at the Mary Fletcher Hospital. Up to the present time the clinical maternity service of the college has been entirely an out patient service at the home and has not been adequate to the needs of the school.

The hospital has rooms which are admirably suited to this purpose. A ward, some private rooms, a large room for a nursery, diet kitchen, bath and toilet rooms, everything needed for a complete modern maternity service.

This free maternity service at the hospital will not only give sufficient opportunity for clinical teaching but will meet a most urgent need of the state for such a service. This ward will be open to any maternity case in the state. Cases from outside the state will be taken when the beds are not required for cases from the state.

It may be of interest to the physicians of the state as well as to the alumni of the medical school to know something of the work in clin-

ical study of the senior students in the College of Medicine under present conditions.

First, there are ten regular clinics each week at which the class is present. All laboratory work in connection with the diagnosis of these clinical cases is done by the student under the direction of the clinical professor of pathology. Usually two students are assigned to examine each case.

In addition to these ten clinics the students have been at the hospitals three afternoons each week for the study of ward cases. Now this service will be increased to every afternoon, part of the class being in the wards and part of them in the dispensary.

The students make a physical examination of each patient, take the history of the case, make all the laboratory examinations which are indicated, and keep a full record of the case from the beginning until the patient is discharged. All this is done under the supervision of the clinical instructor. The student makes daily visits to these patients with the clinical instructor, notes the condition each day, discusses treatment and keeps the record of the case as though he were the regular attending physician. Such clinical instruction cannot fail to produce medical men of a high degree of proficiency and it is a noteworthy fact that the graduates of the University of Vermont College of Medicine compare very favorably with the graduates of Harvard, Yale, Johns Hopkins and Columbia, having practically the same standing as the graduates of Harvard and Johns Hopkins, and a higher standing than the graduates of Columbia or Yale.

The College of Medicine is installing a new reflectoscope which will be of great service in the general course of instruction in the undergraduate course in medicine and will also be of special service in the course of post graduate work. The university is completing a new lec-

ture hall in the College of Medicine where this instrument will be installed which will make the reflectoscope available for any department of the university. This new lecture hall will also make the building of the College of Medicine available for the annual meeting of the Vermont State Medical Society which will be held in Burlington this year, and on account of the lengthening of the college year to nine months, will come while college is in session.

This is only another evidence of the fact that the University of Vermont College of Medicine has the interest of the state at heart and is doing everything it possibly can for the betterment of medical conditions in the state by providing adequate facilities for both undergraduate and post graduate teaching.

The Mary Fletcher hospital, which is working with the College of Medicine to promote better medical teaching and better medical conditions in the state, is installing a new X-ray apparatus at an expense of about \$2,000. X-ray work has developed so rapidly that now the X-ray picture is taken in the fraction of a second, the same as in ordinary photography. The new machine will be of great value in the diagnosis of diseases of the stomach and other abdominal viscera and also in various medical and surgical conditions. This new instrument will be available for use in connection with the clinical service of the College of Medicine and will also be an interesting feature of the course of post graduate instruction when its uses will be fully discussed with the physicians in attendance.

The trend of modern medical education is to require more clinical instruction and it has been a question whether medical schools situated outside of large cities could supply enough clinical material to meet this demand. The University of Vermont College of Medicine has always had high ideals and has always made the most of its opportunities but it has been greatly handi-

capped by lack of sufficient funds to meet the rapidly increasing requirements which are being made on medical schools. Now that the state has recognized its responsibility in giving aid to the College of Medicine the medical school will be able to increase its facilities for clinical teaching in every way.

The College of Medicine has made a great advance in providing material for clinical instruction in securing a contract from the directors of the hospital for a definite use of the hospital wards for clinical teaching, together with the establishment of a free dispensary and free maternity ward, and we believe this will satisfactorily solve the problem of sufficient material for clinical teaching.

The University of Vermont post graduate course in medicine will be given May 7 to 17 inclusive. This course of post graduate instruction for the physicians of the state, which was inaugurated several years ago, has been appreciated so much by the physicians that the course has been lengthened to two weeks. The program has been so arranged that the discussion of correlated subjects is grouped. This will make it possible for physicians who cannot be away from their practice for the entire two weeks to come for two or three days and get the full discussion of a group of related subjects. Dr. Albee, of New York, professor of Orthopedic Surgery, and Dr. Pisek, also of New York, professor of Pediatrics, will give papers and clinics.

This course in post graduate instruction is a most important work of the College of Medicine and cannot fail to be of the greatest benefit to the state by giving to the physicians of the state reliable information in regard to advances in medical knowledge. Improved methods of diagnosis and treatment are being established so

rapidly that the physician who keeps up with this advance must take post graduate work every year. It is often impossible for physicians to get away to the large cities for post graduate work, not only because it takes so much time but also because it entails so much expense. This course at the University of Vermont College of Medicine will make it easy for the physicians of the state to get this post graduate instruction without being away from their practice for a long time and also will save them the expense of a course in the large cities, as this course is absolutely free. The program is given in full.

UNIVERSITY OF VERMONT COLLEGE OF
MEDICINE.

POST-GRADUATE COURSE, MAY 6-17, 1913.

PROGRAM.

Tuesday, May 6, at the Medical College.

9:30-11:30 A. M.

Anatomy of the StomachDr. J. A. Hunter.
Physiology of the StomachDr. F. K. Jackson.
Pathology of the StomachDr. F. E. Clark.

2:30-4:30 P. M.

Physical and X-Ray Examination and Symptomatology of the StomachDr. C. H. Beecher.

8:30 P. M.

Medical Management of Stomach Cases,
Dr. J. N. Jenne.
Surgical Management of Stomach Cases,
Dr. J. B. Wheeler.

Wednesday, May 7, at the Medical College.

9:30-11:30 A. M.

Anatomy of the Liver and Gall-Bladder,
Dr. T. S. Brown.
Physiology of the Liver and Gall-Bladder,
Dr. F. K. Jackson.
Pathology of the Liver and Gall-Bladder,
Dr. B. Joseph.

2:30-4:30 P. M.

Physical and X-Ray Examination and Symptomatology of the Liver and Gall-Bladder in Disease.
Dr. C. H. Beecher.

8:30 P. M.

Medical Treatment of Liver and Gall-Bladder DiseasesDr. D. A. Shea.

Surgical Treatment of Liver and Gall-Bladder Diseases Dr. H. C. Tinkham.
 Refreshments.
 Dr. Lyman Allen.

Thursday, May 8, at the Hospital.

8:30-10:30 A. M.

Gynecological Clinic Dr. P. E. McSweeney.

At the Medical College.

2:30-4:30 P. M.

Examination and Differential Diagnosis of Some of the Commoner Gynecological Conditions,
 Dr. G. M. Sabin.

8:30 P. M.

Non-operative Treatment of Gynecological Cases,
 Dr. P. E. McSweeney.
 Dr. G. M. Sabin.

Friday, May 9, at the Hospital.

9:30-11:30 A. M.

Diagnosis and Treatment of Some of the Commoner Genito-Urinary Conditions,
 Dr. W. W. Townsend.

2:30-4:30 P. M.

Diagnosis and Treatment of Some of the more Common Conditions of the Eye, Ear, Nose and Throat Dr. M. C. Twitchell.

At the Medical College.

8:30 P. M.

Radiographic Visualization of the Gastro-Enteric Tract of Infants Dr. Godfrey Pisek.
 Refreshments.

Saturday, May 10, at the Hospital

8:30 A. M.

Surgical Clinic Dr. J. B. Wheeler.

Monday, May 12, at the Medical College.

9:30-11:30 A. M.

Methods of Examination and Commitment of Insane Patients Dr. W. L. Wasson.

2:30-4:30 P. M.

Demonstration of Some of the Common forms of Insanity.

8:30 P. M.

Demonstration on Animals of the Effect of Various Drugs on Blood Pressure Dr. David Marvin.

Tuesday, May 13, at the Medical College.

9:30-11:30 A. M.

Infant Feeding Dr. C. K. Johnson.

At the Hospital.

2:30-4:30 P. M.

Methods of Examination of Nervous Cases,
 Dr. F. W. Sears.

At the Medical College.

8:30 P. M.

Distribution and Etiology of Acute Infectious Diseases Dr. C. S. Caverly.
 Management and Prophylaxis of Same,
 Dr. C. S. Caverly.

Wednesday, May 14, at the Hospital.

8:30-10:30 A. M.

Surgical Clinic Dr. H. C. Tinkham.

2:30-4:30 P. M.

X-Ray in Diagnosis Dr. L. B. Morrison.

At the Medical College.

8:30 P. M.

Pre- and Post-operative Treatment of Surgical Cases,
 Dr. C. A. Pease,
 Dr. G. M. Sabin,
 Dr. H. C. Tinkham.

Refreshments.

Thursday, May 15, at the Medical College.

8:30-10:30 A. M.

Laboratory Instruction in Uranalysis and Hematology,

Dr. E. H. Buttles,
 Dr. C. F. Whitney.

2:30-4:30 P. M.

Laboratory Instruction in Uranalysis and Hematology,

Dr. E. H. Buttles,
 Dr. C. F. Whitney.

8:30 P. M.

Diagnosis of Some of the Commoner Renal Conditions Dr. M. W. Hunter.
 Treatment of Renal Cases Dr. J. N. Jenne.

Friday, May 16, at the Medical College.

8:30-10:30 A. M.

Laboratory Instruction in Uranalysis and Hematology,

Dr. E. H. Buttles,
 Dr. C. F. Whitney.

2:30-4:30 P. M.

Laboratory Instruction in Uranalysis and Hematology,

Dr. E. H. Buttles,
 Dr. C. F. Whitney.

8:30 P. M.

Diagnosis of Diseases of the Blood... Dr. B. H. Stone.
 Treatment of Blood Disease Dr. C. H. Beecher.
 Refreshments.

Saturday, May 17, at the Hospital.

8:30 A. M.

Orthopedic Clinic Dr. F. H. Albee.

**PUBLIC ACTS OF MEDICAL INTEREST
PASSED BY THE GENERAL AS-
SEMBLY OF 1912.**

Notwithstanding the fact that the Legislature just closed turned down some measures which would have been important additions to our laws, the sum total of the acts passed makes a commendable showing in the laws of public health. Some of these are entirely new and radical, while others simply amend the existing laws.

No. 115 does away with the necessity of issuing a new burial permit when a body is brought into a state with a regular transportation permit issued at the point of shipping.

No. 117 provides for the licensing of a person who sells milk over the counter for consumption as food.

No. 215 will be of interest to health officers especially, as it provides that their expenses when attending the annual school of health officers shall be paid by the state instead of by their own separate towns.

No. 218 is the most radical piece of legislation which was turned out. This is the venereal disease law and should be studied by every physician. Blanks and literature explaining the method of carrying out this law are now being printed by the State Board of Health and will soon be sent out to all physicians in the state.

Nos. 221 and 222 are important in that they include among adulterated articles, devices or apparatus falsely represented to have medicinal or curative qualities, and also prohibits misleading statements, designs or devices on the label of any package.

No. 236 is an entirely new law in this state providing for the wrapping of bread and cake in waxed or tissue paper.

NO. 83.

AN ACT TO PROVIDE APPROPRIATIONS FOR THE UNIVERSITY OF VERMONT AND STATE AGRICULTURAL COLLEGE, ADDITIONAL INSTRUCTION IN MIDDLEBURY COLLEGE AND TO AMEND SECTIONS 1187 TO 1192, BOTH INCLUSIVE, AND TO REPEAL SECTION 1186 OF THE PUBLIC STATUTES RELATING TO SCHOLARSHIPS IN NORWICH UNIVERSITY.

It is hereby enacted by the General Assembly of the State of Vermont:

Section 1. The auditor of accounts shall draw his order in favor of the treasurer of the University of Vermont and State Agricultural College for thirteen thousand five hundred dollars annually for the fiscal years ending June 30, 1914 and 1915, respectively, for the exclusive use of the College of Med-

icine connected with said institution, which shall be expended in establishing and maintaining a free medical dispensary, in furnishing clinical facilities, and for purposes of instruction.

NO. 115.

AN ACT TO AMEND SECTION 3313 OF THE PUBLIC STATUTES, RELATING TO BURIAL PERMITS.

It is hereby enacted by the General Assembly of the State of Vermont:

Section 1. Section 3313 of the Public Statutes is hereby amended so as to read as follows:

Sec. 3313. Whenever a dead body is brought into this state for burial or entombment accompanied by a removal permit issued under the laws of the state from which said body is brought, such permit shall be received as sufficient authority for burial; but if not accompanied by such permit the person or persons in charge thereof shall apply to the health officer or clerk of the town or city in which said body is to be buried for a burial permit, and said health officer or clerk shall issue such permit when furnished with such information as is required by the law of this state as to the identity and cause of death of a person dying in this state.

Approved January 11, 1913.

NO. 177.

AN ACT REATING TO THE SELLING OF MILK AND CREAM.

It is hereby enacted by the General Assembly of the State of Vermont:

Section 1. A person who sells milk or cream over the counter for consumption as food shall be subject to the same regulations and penalties as provided in No. 118 of the acts of 1908 relating to peddling milk from house to house.

Approved January 28, 1913.

NO. 214.

AN ACT TO AMEND SECTION 5411 OF THE PUBLIC STATUTES, AS AMENDED BY SECTION 1 OF NO. 153 OF THE ACTS OF 1908, RELATING TO THE PRESERVATION OF PUBLIC HEALTH.

It is hereby enacted by the General Assembly of the State of Vermont:

Section 1. Section 5411 of the Public Statutes, as amended by section 1 of No. 153 of the acts of 1908, is hereby amended so as to read as follows:

Sec. 5411. Said board shall organize by electing a president and treasurer, and shall appoint a secretary who shall be a reputable practising physician of this state, who shall hold office until his successor is appointed and shall be the executive officer of said board. Said board may also appoint a sanitary engineer and inspector who shall render such service as the board may require from time to time. The salary of the secretary and engineer and inspector shall be determined by said board, subject to the approval of the governor. Upon proper vouchers, approved by the president and treasurer, the auditor of accounts shall draw orders in payment of the salary and necessary expenses incurred in the

discharge of their official duties of said secretary and engineer and inspector from any funds not otherwise appropriated, which payment shall not be computed as a part of the appropriation provided by section 6166 of the Public Statutes.

Sec. 2. This act shall take effect from its passage.

Approved December 18, 1912.

NO. 215.

AN ACT TO AMEND SECTION 5456 OF THE PUBLIC STATUTES, RELATING TO FEES OF HEALTH OFFICERS.

It is hereby enacted by the General Assembly of the State of Vermont:

Section 1. Section 5456 of the Public Statutes is hereby amended so as to read as follows:

Sec. 5456. For each report of a contagious disease, said health officer shall receive from the town for which he acts, fifteen cents; for each biennial report, one dollar; and for sanitary inspection, placarding, quarantining and disinfection of infected buildings and premises, the same as for ordinary professional services, unless he is employed for a stipulated salary. When called by the state board of health to attend a meeting of said board, he shall receive from the state his expenses and the same per diem as members of the state board.

Sec. 2. This act shall take effect from its passage.

Approved January 11, 1913.

NO. 216.

AN ACT RELATING TO THE HEATING AND VENTILATION OF FACTORIES.

It is hereby enacted by the General Assembly of the State of Vermont:

Section 1. The state board of health shall have authority to prescribe regulations for the heating and ventilation of all mills and factories, stone sheds, sheds or other buildings in which five or more persons are employed.

Notice of the promulgation of any order or regulation made by the state board of health pursuant to the provisions of this act shall be communicated in writing to the owner, manager or person in charge of the mill, factory, stone shed, shed or other building concerning the ventilation and heating of which the order or regulation is made, and a copy of such order shall be kept on file by the secretary of the state board of health.

Sec. 2. The court of chancery shall have jurisdiction and power, upon application thereto by the state board of health or a party interested, to enforce its orders or the orders, rules and regulations of said board in the premises, and to restrain the use and occupation of the premises until the orders, rules and regulations of said board are complied with.

Approved January 11, 1913.

NO. 217.

AN ACT TO AMEND SECTION 5440 OF THE PUBLIC STATUTES, AS AMENDED BY SECTION 2 OF NO. 217 OF THE ACTS OF 1910, RELATING TO ISOLATION OF PERSONS INFECTED WITH OR EXPOSED TO CONTAGIOUS DISEASES.

It is hereby enacted by the General Assembly of the State of Vermont:

Section 1. Section 5440 of the Public Statutes, as amended by section 2 of No. 217 of the acts of 1910, is hereby amended so as to read as follows:

Sec. 5440. The local health officer may require under the rules and regulations of the state board of health, the isolation of persons and things infected with or exposed to contagious or infectious diseases, and may with the approval of the local board of health provide suitable places for the reception of the same, and, if necessary, furnish medical treatment and care for such sick persons at their expense if of sufficient ability to pay, otherwise at the expense of the town or city. Said health officer may prohibit and prevent intercourse and communication with, or use of infected premises, places or things; and require, and provide means, at the expense of the town or city for which he acts, for the thorough purification, disinfection and cleansing of the said infected places or things, before free intercourse therewith or use thereof shall be allowed.

Sec. 2. This act shall take effect from its passage.

Approved December 17, 1912.

NO. 218.

AN ACT TO PREVENT THE SPREAD OF CERTAIN INFECTIOUS DISEASES.

It is hereby enacted by the General Assembly of the State of Vermont:

Section 1. Commencing on the date of the passage of this act the superintendent or other officer in charge of public institutions such as hospitals, dispensaries, clinics, homes, asylums, charitable and correctional institutions, shall report promptly to the state board of health the name, sex, age, nationality, race, marital status and address of every charitable patient under observation suffering from venereal diseases in any form, stating the name, character, stage and duration of the infection, and, if obtainable, the date and source of contracting the same.

Sec. 2. Physicians shall furnish similar information concerning private patients under their care, except that the name and address of the patient shall not be reported.

Sec. 3. All information and reports in connection with persons suffering from such diseases shall be regarded as absolutely confidential, and shall not be accessible by the public nor shall such records be deemed public records.

Sec. 4. The state board of health shall provide, at the expense of the state, facilities for the free bacteriological examination of discharges for the diagnosis of gonorrheal infections, and also shall provide, at cost, vaccines or antitoxins for the treatment of such infections. And said board shall make,

at the expense of the state, the Wasserman test or examine smears for the diagnosis of syphilis; and shall furnish the treatment known as "Salvarsan" or other accredited specific treatment at cost. But such diagnosis and treatment shall not be furnished until the data required for the registration of the case has been furnished by the physician or institution treating the patient.

Sec. 5. The state board of health shall include in bulletins or circulars distributed by it information concerning the diseases covered by this act.

Approved February 3, 1913.

NO. 219.

AN ACT RELATING TO THE CARE OF INDIGENT TUBERCULOUS PERSONS.

It is hereby enacted by the General Assembly of the State of Vermont:

Section 1. The governor shall, by virtue of his office, be commissioner of indigent tuberculous persons, and as such commissioner shall constitute the board and shall biennially report to the general assembly his doings under this act with an account of his expenditures.

Sec. 2. A person wishing treatment under this act shall be examined by two physicians in the town or city in which such person resides; and such physicians shall then make a report in writing of their findings to the selectmen of the town or the mayor of the city, who shall investigate the financial condition of the person applying for treatment. The selectmen or mayor after finding such person worthy of treatment under this act shall make a complete report of their findings together with the report of the physicians to the governor.

Sec. 3. The governor may designate beneficiaries under this act and shall direct the time when and the place where such beneficiary shall be treated, and the auditor of accounts shall draw orders for such treatment upon the certificate of the governor and he may in his discretion take a bond to indemnify the state against expenses which accrue in consequence of the clothing or transportation of a beneficiary.

Sec. 4. The selectmen of the town or the mayor of the city may execute in their official capacity in behalf of their respective towns or cities, without a previous vote, the bond which may be required to be given by the town or city to indemnify the state against expenses which may accrue in consequence of the clothing or transportation of beneficiaries from such town or city.

Sec. 5. When a person is designated a beneficiary, the town or city in which he resides shall defray the expenses of his conveyance to and from the institution in which he is sent for treatment, and shall provide necessary clothing.

Sec. 6. The beneficiaries specified in this act shall receive treatment in the Vermont Sanatorium at Pittsford or a similar institution.

Sec. 7. The sum of five thousand dollars is hereby annually appropriated for the purpose of carrying out the provisions of this act.

Sec. 8. This act shall take effect from its passage.

Approved January 30, 1913.

NO. 220.

AN ACT TO AMEND SECTION 3 OF AN ACT ENTITLED, "AN ACT RELATING TO THE CARE OF INDIGENT TUBERCULOUS PERSONS," APPROVED JANUARY 30, 1913.

It is hereby enacted by the General Assembly of the State of Vermont:

Section 1. Section 3 of an act entitled, "An act relating to the care of indigent tuberculous persons," approved January 30, 1913, is hereby amended so as to read as follows:

Sec. 3. The governor may designate beneficiaries under this act and shall direct the time when and the place where a beneficiary shall be treated, and the auditor of accounts shall draw orders for such treatment upon the certificate of the governor and the governor may in his discretion take a bond to indemnify the state against expenses which accrue in consequence of the clothing or transportation of a beneficiary.

Sec. 2. Section two of an act relating to the care of indigent tuberculous persons approved January 30, A. D. 1913, is hereby amended so as to read as follows:

Sec. 2. A person wishing treatment under this act shall be examined by two reputable physicians licensed to practice in this state, and such physicians shall, immediately after such examination, make a report in writing of their findings to the selectmen of the town or the mayor of the city in which such person resides. The selectmen of the town or the mayor of the city shall then investigate the financial condition of the person applying for treatment, and if such person is found worthy of treatment under this act, shall make a complete report of their findings together with the report of the physicians to the governor.

Sec. 3. This act shall take effect from its passage.

Approved February 13, 1913.

NO. 221.

AN ACT TO AMEND SECTION 5466 OF THE PUBLIC STATUTES, AS AMENDED BY SECTION 1 OF NO. 159 OF THE ACTS OF 1908, RELATING TO SALES OF ADULTERATED ARTICLES.

It is hereby enacted by the General Assembly of the State of Vermont:

Section 1. Section 5466 of the Public Statutes, as amended by section 1 of No. 159 of the acts of 1908, is hereby amended so as to read as follows:

Sec. 5466. No person shall sell, offer or expose for sale an adulterated or misbranded food, drug or substance, to be used for medicine, food or drink for men or domestic animals, or any device or apparatus falsely and fraudulently represented to have medicinal or curative qualities.

Sec. 2. This act shall take effect from its passage.

Approved December 19, 1912.

NO. 222.

AN ACT TO AMEND SECTION 5473 OF THE PUBLIC STATUTES, AS AMENDED BY NO. 160 OF THE ACTS OF 1908, RELATING TO THE MISBRANDING OF DRUGS.

It is hereby enacted by the General Assembly of the State of Vermont:

Section 1. Section 5473 of the Public Statutes, as amended by No. 160 of the acts of 1908, is hereby amended so as to read as follows:

Sec. 5473. For the purpose of this chapter, a drug shall be deemed to be misbranded.

(a) If it is an imitation of or offered for sale under the name of another article; or

(b) If the contents of the package as originally put up have been removed, in whole or in part, and other contents have been placed in such package; or

(c) If its package or label shall bear or contain any statement, design or device regarding the curative or therapeutic effects of such article or any of the ingredients or substances contained therein, which is false and fraudulent; or

(d) If the package fails to bear a statement on the label of the quantity or proportion of any alcohol, morphine, opium, cocaine, heroin, alpha or beta eucaine, chloroform, cannabis indica, chloral hydrate or acetanilide, or any derivative or preparation of any such substances contained therein. Nothing in this paragraph (d) shall be construed to apply to physicians' prescriptions, or preparations recommended and prescribed in the United States Pharmacopoeia or National Formulary.

Sec. 2. This act shall take effect from its passage.

Approved December 17, 1912.

NO. 236.

AN ACT TO IMPROVE SANITARY CONDITIONS IN THE SALE OF BREAD AND CAKE.

It is hereby enacted by the General Assembly of the State of Vermont:

Section 1. No person shall carry or cart about with intent to sell or offer for sale, or deliver to customers after it has been sold for human food, any kind or quality of bread or cake in loaf form, unless each loaf be wrapped separately in waxed paper, tissue paper or some similar wrapper or a sanitary container of sufficient thickness and quality to protect the bread and cake from dust and dirt.

Sec. 2. A person who violates a provision of this act shall be fined five dollars for each offense.

Approved December 10, 1912.

OBITUARY.

Dr. Albert Richmond died in Claremont, Calif., March 10, 1913. Dr. Richmond was a graduate of the medical department, class of 1869. After graduation he moved to Ames, Iowa, where he practiced for three years until he was called to Rochester, Vt., by the failing health of his father. After the death of his father he returned to Iowa and practiced in Algona and Ames until his own failing health made it necessary for him to give up active work. It was at this time that he went to California to be near his twin brother, who was also a physician.

Dr. Richmond was interested in all good works and was deeply loved and honored by all who knew him.

Dr. John H. Winch of Northfield died recently at Heaton Hospital, where he had been for treatment for a week. He leaves a wife and one son, Cecil S. of Akron, Ohio. Dr. Winch was 58 years of age, and was the oldest practicing physician in town. He was a graduate of the medical department of the University of Vermont in 1880. He had represented the town in the Legislature and was always prominent in town, village and school affairs. He was a member of Northfield Lodge of Odd Fellows, and was only recently appointed a member of the United States board of pension examiners.

NEWS ITEMS.

Dr. John P. Tierney whose home is in St. Johnsbury has entered practice at Hardwick. Dr. Tierney is a graduate of the class of 1911, Baltimore Medical School.

Dr. W. D. Bowen was recently elected school director of the town of Rockingham after a spirited contest. Dr. Bowen's majority over his competitor, J. E. Piddock was 182.

The National Anti-Opium Congress will appeal to the Young Men's Christian and Missionary societies for funds for the purchase of as large a portion as possible of opium at the treaty posts in China. The opium thus purchased will be burned.

A patient who leaped from a third story window of a sanatorium at Brentwood, L. I., owned by Dr. William N. Ross, got a verdict of \$6,000 from a jury in the supreme court recently. The patient was a man suffering from delirium tremens and while unguarded jumped from the window. He brought suit for \$25,000 damages for his injuries which were serious.

Emeline Churchill Tolles, wife of Dr. Clarence W. Tolles of Claremont, N. H., died January 9th of pneumonia. Dr. Tolles has practiced in Claremont for 45 years.

Dr. William B. Mayor of Northfield and Miss Prudence Stickney were married February 27th and have gone to the Pacific coast on a wedding trip.

Dr. William J. Norton, son of the man who first used ether as an anesthetic, has been sentenced to serve one year and a day in the Federal prison at Atlanta for fraudulent use of the mails in selling worthless mining stock. Dr. Morton is 68 years old. He is a graduate of Harvard and has for several years specialized in X-ray treatment. He has lectured in different hospitals and medical schools.

Dr. Prince A. Morros, one of the highest authorities on leprosy and skin diseases, died suddenly at his home in New York, March 18th. He was one of the first physicians to advance the theory that leprosy entered the body by way of the nostrils.

An English-speaking Conference on the Prevention of Infant Mortality will be held in Caxton Hall, Westminster, London, on Monday morning, Monday afternoon and Tuesday morning, August 4th and 5th. The meetings will be held under the auspices of the (British) National Association for the Prevention of Infant Mortality and the Welfare of Infancy under the Patronage of the King and Queen, and will convene immediately preceding the opening of the International Medical Congress.

A tentative program has been issued by the committee which indicates that the papers will consist largely of medical opinion. The subjects treated will be:

The responsibility of central and local authorities in infant and child hygiene.

The administrative control of the milk supply.

The necessity for special education in infant hygiene.

Medical problems in infant nutrition.

Ante-natal hygiene.

The president of the Conference will be the Hon. John Burns, M. P., president for the local government board. The chairman of the English executive committee is Sir Thomas Barlow and the secretary, Miss J. Halford, 4 Tavistock Square, London, W. C.

The American committee, in charge of the part to be taken by the United States and Canada, will furnish information to those desiring to attend the conference.

Dr. Henry L. Coit, chairman, 277 Mt. Prospect avenue, Newark, N. J.

Dr. Philip Van Ingen, secretary, 125 East 71st street, New York City.

The spring clinic of the American Association of Orificial Surgeons will be held in the Surgical Amphitheatre of Hering Medical College, corner of Wood and York streets, Chicago, Ill., April 23-4-5-6. Dr. E. H. Pratt, A. M., M. D., LL. D., and assistants will operate on clinical patients, demonstrating the fundamental principles of Orificial Surgery as applied in the treatment of chronic diseases and as an adjunct to major surgery in general.

On April 26th, the fourth and last day of the clinic Dr. Pratt and assistants will demonstrate other therapeutic measures which have been recently introduced to the medical profession; including abdominal calisthenics, manual therapeutics, high frequency treatment of internal organs, spondylotherapy and new hydrotherapeutic measures. These measures will be introduced and demonstrated not as curative measures within themselves alone, but as adjuncts to the ordinary armamentarium of the physician.

Tuition to this clinical course is free to all practicing physicians, medical students and nurses.

Physicians are invited to bring clinical cases for operation. No operating fee will be charged. Excellent hospital accommodations will be provided. Opportunity will be presented for the physicians bringing clinical cases to assist personally in the operation.

The clinic headquarters will be the Hotel La Salle where reservations may be made in advance. For further information address the secretary of the association, W. A. Guild, Des Moines, Iowa.

The Governors of the New York Skin and Cancer Hospital announce the following course of clinical lectures and demonstrations in the Out-Patients Hall of the hospital on the following Wednesday afternoons at 4.15 o'clock, on surgical diseases of the skin:

April 2, Dr. Bulkley; April 9, Dr. Bulkley; April 16, Dr. Bulkley; April 23, Dr. Bulkley; April 30, Dr. Bulkley; May 7, Dr. Bulkley.

Surgical Treatment of Malignant Diseases: May 14, Dr. Bainbridge. Each lecture will be illustrated by cases, models, colored plates, photographs, etc. The lectures will be free to the medical profession, on the presentation of their professional cards. Charles C. Marshall, chairman of executive committee.

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THERAPEUTIC NOTES.

THE VALUE OF STARCH-TREATED FOODS IN THE DIETO-THERAPY OF DIABETES-MELLITUS—Norton (*Medical Summary*, March) says: "No subject in medicine has, for the past one hundred and fifty years, been given more thought, from a scientific and experimental standpoint, than Diabetes, and yet no subject, as to the true pathology and etiology of which, we possess proportionately less accurate information."

"Dieto-therapy offers the greatest and most rational promise of relief or cure, and is by far the sheet anchor in the treatment of diabetes, and is more efficient than any drug or combination of drugs, and no permanent results have ever been obtained without strict dietetic supervision. Unfortunately, pharmacology has not provided any drug which acts directly upon the excitability of the sugar-forming process of the liver. All authorities agree that the diabetic wastes away and starves to death—from consuming his own tissues—through the impaired condition of the 'Glycogenic function' of the liver."

He affirms that heretofore the difficulty in the successful management of diabetes has been that the patient could not assimilate foods containing carbohydrates in the form of STARCH as it appears in the ordinary food products, and by eliminating the starch from the products their value as a sustaining food is completely destroyed.

He also emphasizes the fact—"All the working cells of the body use sugar as their foodstuff and immediate source of energy, which if not supplied from the food (starch) ingested, must be taken out of the tissues, and in the patient suffering from diabetes the WASTE from the body is more than the INTAKE of food into the system."

The author's experience coincides with Von Noorden and other eminent authorities that the best food for the diabetic is the food containing the greatest amount of carbohydrates which they can tolerate, because in the carbohydrates is contained the greatest proportion of calories, or heat units, which go to make up the energy of life.

Dr. Norton states that while he realized that Van Noorden's deductions were correct, yet while entertaining little hope that a starchy food which a diabetic could ingest with impunity would ever be perfected, it was by a mere "coincidence" that his attention was brought to such a food.

The Doctor, in commenting on the case treated with this food says: "When his patient returned after three months—all the while eating the starch-treated foods, he was amazed, but agreeably surprised at the remarkable improvement, which continued after the lapse of a year. Health, strength, and weight gradually increased on these foods, together with eggs and other suitable diet, and the sugar slowly disappeared from the urine, only traces now being present."

The author refers to the increased death rate from diabetes and avers that "before the present process of refining, bolting, and bleaching flour became common, there were few cases of diabetes in either men or women, but of late years from the constant ingestion of insoluble starchy foods, this disease has increased with leaps and bounds. He points out the amazing fact that the rapid increase in the death rate from diabetes has kept pace with the 'patent roller' process of manufacturing flour."

The Doctor in describing the process of treating the starch says: "Each starch granule in cereal food products is enclosed in a tough envelope that

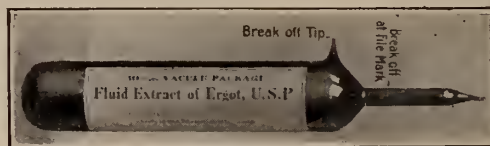
the process of grinding does not break. To render these easy of digestion, without the formation of sugar in the diabetic, is the secret of these starch-treated foods."

"The starch granules are thoroughly broken up by diathermous fermentation, produced by the addition of certain digestive enzymes to the flour, which after thorough trituration, is subjected to a certain degree of heat applied for a specified period of time, by especially constructed machinery—designed for this particular purpose."

"The above treatment applied to a whole-wheat-stone-ground-flour followed by the scientific application of heat causes a commingling of the carbohydrate and nitrogen molecules of the starch granules of the wheat berry, resulting in a very slight fermentation leading to division and expansion, after ingestion, and to final disintegration in the small intestine."

The author refers to the mineral constituents of the wheat berry as follows:—"The wheat berry contains about 75% of starch, and in combination are certain other constituents, gluten, nitrogen, carbon, chlorine, calcium, phosphorus, sulphur, sodium, potassium, ferrum, magnesium, and fluoric acid. Nature placed the above named mineral or cereal salts into the wheat berry that the Biblical injunction might be fulfilled, that bread would really be the 'staff of life' but to change the starch in flour from which the above cereal salts have been eliminated—by present day method of milling—is impossible, and it is likewise impossible to render it soluble so that the dextrin and glucose can be appropriated and oxidized by the various ferments of the digestive tract."

The author then describes a food product marketed under a trade name which he says fills the requirements for assimilable carbohydrate food.



THE NEW VACULE PACKAGE—A novel package is now being extensively advertised by the H. K. Mulford Company of Philadelphia as the "New Vacule Package." These "vacules" are vacuum containers especially employed for the prevention of deterioration in the activity of potent drugs, especially Digitalis, Ergot and Strophanthus. Careful investigations show that many preparations undergo changes, even when kept in tightly corked bottles, which result in a great loss of activity and thus render them unreliable as therapeutic agents. Only recently was it discovered, as a result of a series of experiments conducted in the Mulford Research Laboratories, that the changes to which the deterioration in these preparations is due, are caused primarily by the action of oxygen of the air which is held in solution in the liquid.

Further investigations show that with complete exhaustion and exclusion of air from the container and its contents, practical permanency may be secured, and in accordance with this, the H. K. Mulford Company have placed upon the market standardized preparations of Ergot, Digitalis and Stro-

phantus in "Vacules" (Vacuum Ampuls), which differ from ordinary "sealed ampuls" in that all the air is removed from the liquid contained in the Vacules, which ensures permanency to the product.

THE CHOICE OF A RECONSTRUCTIVE AFTER PNEUMONIA.—The hypersusceptibility of a patient after pneumonia to tuberculosis emphasizes the need for more than ordinary care in the selection of a reconstructive for the convalescent period. In line with this point, the first requirement to be made of the reconstructive is that it possesses the power of charging the exhausted tissues with nutrition and thus renew the ordinary resistance against tuberculosis invasion.

A further necessary quality of the reconstructive selected is palatability. Cord. Ext. Ol. Morrhuae Comp. (Hagee) fully meets these several demands, as a result of which it proves a most reliable and satisfactory reconstructive agent in pneumonia convalescence.

The value of this cod liver oil product for the purpose named is so generally accepted that, with many physicians, its administration is a routine practice. The advantages of Cord. Ext. Ol. Morrhuae Comp. (Hagee) lie in its proven therapeutic power and its very acceptable character.

THE NERVOUS TRIALS OF THE ALCOHOLIC.—The physician who has not yet employed it as a means of relief in the nervous element of alcoholism, will be most agreeably surprised the first time he resorts to PASADYNE (Daniel's Concentrated Tincture of Passiflora Incarnata) in the condition mentioned.


The distinct power it possesses as a calmative agent is markedly enhanced by its freedom from danger or evil effects, a point worthy of consideration during the choice of a sedative agent. PASADYNE may be fully relied upon to soothe hypercerebration and bring about a refreshing sleep. A sample bottle may be had by addressing the Laboratory of John B. Daniel, Atlanta, Ga.

THE ELIMINATION OF OPIUM'S UNTOWARD PHENOMENA.—Were it not for its several disagreeable features which are sufficiently weighty to make one hesitate before employing it, opium, of course, would be the ideal analgesic. Unfortunately, however, along with its analgesic effects, opium exerts those well known phenomena which tend to limit its usefulness as a pain-relieving agent.

But with the discovery of processes by which it is possible to eliminate the convulsive and narcotic principles of the drug, PAPINE (Battle) became possible, and with a wider therapeutic application than opium.

In the manufacture of PAPINE, the several objectionable qualities of opium have been eliminated, the finished product representing the analgesic and sedative properties only of this valuable drug.

In view of this, the superiority of PAPINE over opium and its alkaloids cannot be denied, for although offering to the patient the positive analgesic properties of opium it does not at the same time bind up his bowels or subject him to its other dis-



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agreeable effects. The utmost care is taken in the manufacture of PAPINE and it is fully believed that it offers every possible advantage over opium.

DRESSINGS IN SUPPURATING WOUNDS.—The healing of suppurating wounds may be expedited in a marked degree by the use of ECTHOL (Battle). In addition to a germicidal influence it adds to cellular resistance, as a result of which the luxuriant germ growth becomes inhibited, until finally the purulent process becomes reduced to the point where the resistance of the involved tissues turns the tide toward healthy granulation. Where such wounds are of more than ordinary size or severity, the internal administration of ECTHOL has proven a most useful adjunct to the local treatment.

REDUCTION OF NERVE TENSION.—One of the most positive therapeutic powers possessed by PASADYNE (Daniel), the Concentrated Tincture of Passiflora Incarnata, manifests itself in states of a high nervous tension. As a rule the sufferers are poorly equipped with moral resistance and consequently it is of the highest importance in choosing remedial measures to guard against agents which might establish a habit. In using PASADYNE (Daniel) the physician need not give this possibility any heed, for it is quite free from any such a disadvantage. In a wide variety of nervous affections PASADYNE (Daniel) is of the utmost value, which is further enhanced by its freedom from evil consequences. A sample bottle may be had by addressing the laboratory of John B. Daniel, Atlanta, Ga.

FACTS ABOUT PHYLACOGENS.—Practitioners who have a fondness for figures, and who want definite, first-hand knowledge of what the Phylacogens are accomplishing in the way of actual clinical results, are urged to turn to the display announcement in the current issue of this journal bearing the signature of Parke, Davis & Co. Here, under the title "The Value of the Phylacogens," one finds the results in 4,148 cases of infectious disease that have been treated with Phylacogens. One also reads in detail what is credited to each individual Phylacogen. For instance, you may be interested in rheumatic affections. You see at a glance that a certain number of cases have been treated and reported; the same glance tells you how many of them were treated successfully. This is equally true of pneumonia cases, erysipelas cases, gonorrheal cases, mixed-infection cases. Figures are apt to be tiresome. These figures are not so; they tell what every practitioner of medicine wants to know or should know. We commend the announcement to our readers.

SCHOOL DISEASES.

Children of school age contract such diseases as measles, scarlet fever and diphtheria much more frequently than older persons. All that has been learned about the modes of transmission of certain diseases, notably diphtheria, in-

dicates that the taking of a large number of children out from their restricted family and neighborhood relationships and bringing them into contact with a much larger group will increase the opportunities for infection. As regards opportunities for infection furnished by the school, it must be admitted that while the slate, the common drinking-cup and the roller-towel are fast passing away, sufficient facilities for the transfer of disease germs still exist in the friendly exchange of pocket handkerchiefs, lip-moistened lead-pencils, chewing-gum and the like. The school playground, as well as the schoolroom, must be considered in its bearing on the subject of school diseases. The significance of school attendance on the public health side lies not only in the assembling of children in a room, but also in the bringing into more or less intimate association a number of children who would otherwise not have met at all. Increasing the number of associates must necessarily increase the chances of infection. Diphtheria and scarlet fever show a marked increase in the autumn when the schools open and an equally definite decrease in the summer when the schools are closed.

The discovery of the part played by the healthy germ-carrier throws light on the probable origin of certain obscure cases of infection, says Prof. E. O. Jordan of the University of Chicago in a recent issue of *The Journal of the American Medical Association*. A child in a family in which a case of diphtheria exists may bear in its throat living diphtheria bacilli without manifesting any sign of disease. If this child is allowed to enter school a playmate may acquire the bacillus without in its turn becoming definitely ill. This second child, however, may take the germ home and pass it on to a non-school-going child in the same family who then may develop a typical case of diphtheria. Methods of control of school and institutional outbreaks of diphtheria are therefore coming to be focused on the detection and exclusion of the carrier. Disinfection of innocent chairs and tables and enforced school closure are in general found to be less effective than the discovery and isolation of the living bearer of diphtheria germs. When school attendance is regulated by bacteriologic findings school epidemics quickly subside.

Subcutaneous injections of oxygen are used by Sepelier in dyspnea of various causes.

Doctor Friedmann in Canada.—According to newspaper reports, Doctor Friedmann treated fifty-six cases of tuberculosis at the Royal Edward Institute in Montreal, on Tuesday, March 11th. The demonstration was attended by fifty physicians from the hospitals and others engaged in private practice, among them being Dr. J. George Adami, professor of pathology in McGill University, who expressed himself as content to await results before judging of the value of the treatment. Others who attended the demonstration were from Quebec, Halifax, and Toronto, and deputations from every Province of the Dominion called upon Doctor Friedmann and invited him to prolong his stay and give demonstrations elsewhere. On Tuesday evening he went to Ottawa, on the invitation of both the Dominion and the Provincial governments, to attend the meeting of the Anti-tuberculosis Association, where he will treat a large number of selected patients. On his return to New York Doctor Friedmann will treat patients in Mount Sinai Hospital, the Montefiore Home, and the People's Hospital. Official tests of the Friedmann cultures are being carried on in the hygienic laboratories of the United States Public Health Service in Washington, under the direction of Surgeon John F. Anderson, chief of the laboratories, who has been detailed by Surgeon General Blue to make these investigations, having been furnished cultures by Doctor Friedmann.

Physicians Protest against Cocaine Legislation.—At a meeting of the Society of Medical Jurisprudence, held in New York on Monday evening, March 10th, the members present went on record as protesting against all the various bills now before the legislature of the State of New York regulating the traffic in cocaine.

Prescriptions in English.—A bill has been introduced into the Nebraska legislature by Mr. Smith, which provides that English shall be used in the writing of all prescriptions, and forbids the use of any other language. A similar bill has been introduced into the North Dakota legislature by Mr. Davidson.



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The Cleeman Dormitories of the University of Pennsylvania.—Plans are nearly completed for the \$50,000 dormitory building of the University of Pennsylvania, and ground for the building will be broken next week. The new dormitory, which was bequeathed to the institution by Dr. Richard A. Cleeman as a memorial to his brother Ludovic C. Cleeman, will be built in the quadrangle.

Prescribing of Secret Remedies Prohibited.—A bill has been introduced into the legislature of the State of North Carolina making it unlawful for any physician or other person to prescribe or recommend any drug or preparation without knowing its true nature and composition. The prescriber is also required to make known the nature of the composition and is to be expected to do so by the patient.—*N. Y. Medical Times*.

A national Croatian hospital for tuberculosis immigrants from that country is now being planned in the far west.

The gift to medical science of a fully equipped institute for medical research in Paris is the method of celebrating his silver wedding adopted by Harris Singer, a wealthy American who lives there. The institute, which will be conducted on the lines of the Rockefeller Institute of New York, will stand on the site at Bellevue now occupied by the Paillard Palace Hotel, which will be adapted to the institution's needs. It will be open to students from all nations.

According to the terms of the hero fund recently given by Andrew Carnegie to Italy "no action is more heroic than that of the physicians and nurses who voluntarily offer their services in cases of epidemics."

The international hygiene and maritime exposition to be held at Genoa, Italy, March, 1914, is to have an Italian colonial exhibit which is to be made a special feature of the exposition from the historic and medical standpoints.

The St. Louis Medical Society at its last meeting voted to co-operate with the American Medical Association in its endeavor to stamp out the practise of fee-splitting and recommended that members found guilty be expelled from the society.

The domestic dog has now been added to the fly (Howard and Clark) as the carrier of the virus of acute poliomyelitis.

The Kansas Medical College, at Topeka, will close at the end of 1913 term.

As showing the course of public opinion Indiana asks its legislature for these laws:

1. For a civil service for county health officers.
2. For the removal of the pathologic laboratories of the state from the state house.
3. For empowering the state board to pass on all school-house plans.
4. For the establishment of a department of sanitary engineering.
5. For the enlargement of the capacity of the State Pasteur Institute.
6. For the enlargement of the executive offices of the state board at the state house.
7. For the co-operation with other states in work on occupational diseases, bad housing, etc.
8. For the control and eradication of cattle tuberculosis.
9. For the restriction of the use of cocaine to physicians and dentists.
10. For the prohibiting of fraudulent advertising of medicinal preparations intended to be used for cure of diseases of men or animals.—*Medical World*.

There are two physicians in U. S. Senate: Gallinger of New Hampshire, a homeopath, who has not practiced for many years and who is considered an anti-vivisectionist and anti-vaccinationist; Harry Lane, newly elected from Oregon, a regular, in active practice up to the present and supposed to favor animal experimentation, vaccination, etc.—*Med. Review of Reviews*.

A hospital will be built by the Salvation Army in Montreal, to be called the General Booth Memorial Hospital.

The death rate in Pennsylvania has been reduced to fourteen in a thousand, according to report of Health Commissioner Dixon.

An official medical reserve corps for the navy, like that for the army, made up of physicians everywhere in private life, is now being formed.

Dr. Jabez N. Jackson, of Kansas City, was elected president of the Western Surgical Association at its meeting in Cincinnati, December 21.

Lima, the Peruvian capital, will next summer be the scene of the sixth Pan-American

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The Medical Department of the University of Vermont will appreciate it very much if any of the Alumni can furnish catalogues of the Medical Department of the following dates to complete the files, 1857-66-7-8-9-71 and 73. These may be sent to the Dean.

Congress and at the same time of the Fifth Latin-American Congress.

The psychiatric clinic of Johns Hopkins hospital will open April 16 with accommodations for one hundred patients. It will be divided into three classes, acute, semi-acute and quiet.

Five hundred cases of Radam's Microbe Killer have been seized in Minneapolis by government officials because of the false claim made by its distributors that it will cure leprosy, yellow fever, etc.

(Continued on page xx.)

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Burlington, Vermont.

Dr. C. G. Elmore, formerly of Chadron, Neb., has been appointed sanitary inspector of the Chicago & North Western railway. His especial duty is to consider the sanitation of coaches and chair cars.

A new department for the study of tropical diseases has been established at Harvard Medical school. It will have at its head Dr. Richard Pearson Strong, with whom will co-operate Drs. Theobald Smith, H. C. Ernst, W. T. Councilman, E. E. Tyzzer, S. B. Wolbach and M. J. Rosenau.

Word has just been received that the Memphis Hospital Medical College and the University of Tennessee Medical Department, both located at Memphis, have been merged and will continue under the latter name. This leaves but one medical school for white students in Memphis.

On account of the prevalence of scarlet fever in Cheyenne, Wyo., the holding of public entertainments has been prohibited. Children have also been forbidden to enter moving picture shows or other public places. The schools will remain closed until it is considered safe to reopen.

Surgeon General Stokes, of the navy, told the house committee on Naval Affairs at Washington, December 7th, that there had not been a single case of typhoid fever in the whole American navy, with its 64,000 men, since the adoption, eleven months ago, of the antityphoid treatment.—Exchange.

Pennsylvania's seven-year-old official war against tuberculosis has given that state the lowest death rate from that disease. Having the largest mountain forest reserves, 550,000 acres, with three great camps and a widespread dispensary system for such sufferers, explains this enviable record.

The British Medical Association has refused to accept the modified terms offered by Lloyd George for medical attendance under the Insurance Act. This action has raised a storm of abuse of the medical profession by the liberal papers, and the government threatens to establish a state medical service.

The number of medical students is gradually decreasing, year by year, in the United States

and England. Our British cousins attribute the decline to the national insurance scheme now being put in operation in England. In this country, increased educational entrance requirements is credited with the decrease in the size of the class.

To stamp out tuberculosis in Indiana in less than a decade is the intent of a far-reaching law that will be asked from the coming legislature by the committee on tuberculosis of the Indiana State Medical Association. The law will propose in substance that each county shall provide a special place for the care of chronic victims of tuberculosis to prevent them from infecting others.

A writer in an Indian journal calls attention to a simple method for removing corns and warts, which he naively describes as "very cheap." His treatment consists of holding a convex lens over the corn or wart at a distance of about 6 or 8 inches after the manner of a burning glass. This is to be done daily for about five or six minutes. The wart disappears altogether after five or six applications.

The last obstacle to the merger of the University College of Medicine and Medical College of Virginia has been removed and the union of the two institutions will in all probability be legally consummated within a very few days. The new institution will appear under the name of the Medical College of Virginia and will embrace the plants and equipment of the two merging colleges, the Memorial Hospital and the Virginia Hospital.

Orville Horwitz, M. D., Jefferson Medical College, Philadelphia, 1883; emeritus professor of genito-urinary surgery in his alma mater; formerly surgeon to Jefferson Medical College Hospital, St. Agnes Hospital, the State Hospital for the Insane and Philadelphia General Hospital; consulting surgeon to the Jewish Hospital; formerly a member of the American Medical Association; a member of the Philadelphia College of Physicians, American Surgical Association, American Association of Genito-Urinary Surgeons and American Urological Association, died at his home in Philadelphia, January 28, from spinal sclerosis, aged 52.—*Western Med. Review.*

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Vermont Medical Monthly

Official Organ of the Vermont State Medical Society.

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TABLE OF CONTENTS


ORIGINAL ARTICLES:—

A Brief of Recent Experimental Work with Cancer Ferments, By C. F. Ball, M. D.	105	CLINICAL SOCIETY OF THE NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL	120
A Consideration of the Effects of Alcohol When Used as a Medicinal Agent, By David Marvin, M. D.	108	NEWS ITEMS	122
EDITORIAL	117	OBITUARY	125
		BOOK REVIEWS	126
		AN EPITOME OF CURRENT MEDICAL LITERATURE...	128
		THERAPEUTIC NOTES	xii

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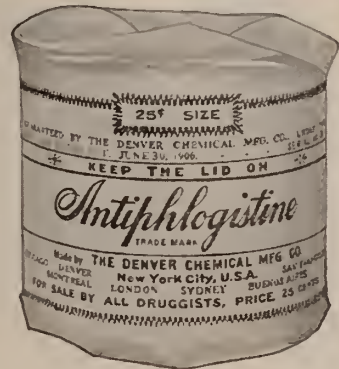
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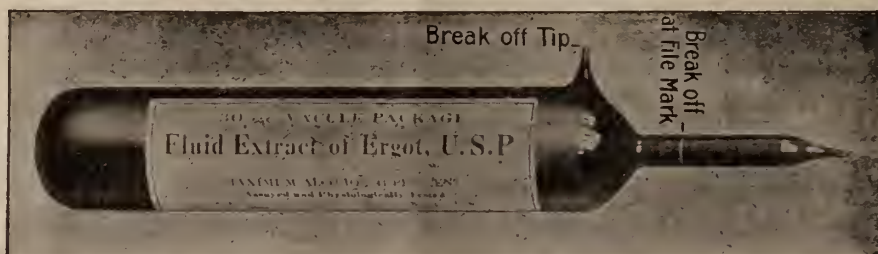
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Miss Goodrich of New York has been elected president of the International League of Nurses. The next convention will be held in San Francisco in 1915.—*Exchange*.

The New York Polyclinic Medical School and Hospital has recently received an additional donation of \$50,000 for the new Building and Equipment Fund, and a legacy of \$3,000 under the will of the late David J. Garth, at one time a trustee of the institution.—*Pacific Med. Journal*.

Announcement has been made of a clinic in Vienna, Austria, for the study of cerebrospinal meningitis. The clinic is to be under the direction of Dr. Berthold Beer and has been founded and endowed as a memorial to the late Mr. E. H. Harriman of New York, and will be open to American physicians studying abroad.—*Pacific Med. Journal*.

Tuberculosis caused the death of 126,744 during 1909 in the United States.—*Pacific Med. Journal*.

Dr. C. Annette Buckel, of Piedmont, died August 19, 1912. Dr. Buckel was born in the state of New York in 1833 and graduated from the Women's Medical College of Pennsylvania in 1858. During the war she distinguished herself through her services as volunteer nurse, and was finally appointed commissioner for Indiana. She also had the distinction of being one of the very few women to hold a pass from General Grant, giving her admittance to every army hospital in the United States.—*Pacific Med. Journal*.

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ORIGINAL ARTICLES.

A BRIEF OF RECENT EXPERIMENTAL WORK WITH CANCER FERMENTS.*

BY

DR. C. F. BALL,
Rutland, Vt.

"The only way in which cells of any kind—bacterial, protozoal, or animal can grow and multiply is by elaborating ferments which split up the pabulum within their reach, thus preparing a food supply. The cell which can no longer supply a digestive ferment is already dead, whatever be the kind or amount of pabulum surrounding it. The cell which supplies only such ferments as cannot digest the food supply within its reach dies immediately. This is the fundamental fact of the general immunity possessed by the higher animals against the lower forms of life."

"Cellular digestion is a physiological process and it is normally specific inasmuch as the secretions of each kind of cell splits up the pabulum in such a way as to supply the needs of its own cell, but the pabulum upon which the cells of the body normally feed consists of the proteins of the blood and lymph. From these sources all the cells of the body select their food material through the agency of their digestive ferments." (*Vaughn, A. J. M. S.*, Feb., 1913). The digestive juices break up the proteins taken into the alimentary tract into amino-acids which are reassembled into special protein groups during absorption peculiar to the species. Foreign proteins occasionally find their way into the blood and lymph and to meet this emergency a specific ferment is elaborated to digest this foreign protein and no other. (Abs. Ibid).

The bacillus prodigiosus is not pathogenic to man because it cannot produce a ferment capable of dissolving human proteids from the blood or lymph. A dilution of nuclear elements as great as 1-90,000 of bacillus prodigiosus will kill a guinea pig, while a dilution of only 1-1700 is

required of bacillus anthrax to kill a pig of similar size. Though the anthrax is less poisonous to the guinea pig than the bacillus prodigiosus it has the power of producing a ferment capable of dissolving out its food from human tissues thus enabling it to live and thrive as one of our most dreaded infections.

A special field is opened for new bio-chemical research work upon the above principles as presented by Vaughn, Abderhalden and others. We will be able soon to get information from either the proteins or the ferments as tests are developed revealing the true nature of each. That this is not mere theory is well indicated by the recent work of Abderhalden wherein he has developed a test for pregnancy, in that he has developed a means of identifying a ferment that is capable of digesting the protein of a placental extract, "(polariscope, appearance of peptone in the dialysate of mixtures of placental material and serum of the pregnant)."

Further than this he has shown that the system produces a ferment for natural and unnatural materials that are introduced into the blood stream naturally or artificially. I wish that it were possible for us to grasp the possibilities opened by the recent work of Prof. Abderhalden. Cancer will soon yield. Now that pregnancy may be determined within a few days of the date of conception, we must patiently expect that it will be possible to detect the early inroads of the cancerous (sarcomata) processes by similar methods.

Experimental work in the transmission of malignant tumors in successive generations of the lower animals appears to show that it is due to some extrinsic cause, rather than the exaltation of dormant or aberrant embryonal cells.

Rouse in an article entitled "Transplantable tumors of the fowl a neglected material for cancer research" (*Jour. A. M. A.*, June 1, 1912), after reviewing in a general way the results of experimental new growths cultivated in rats, mice, dog, wild hares, etc., calls attention to the value of the common fowl as being excellent material for experimental tumor work. He notes that true tumors are rare in cats, rabbits and guinea-pigs. He states that the animal em-

*Given before the Rutland Clinical Club.

ployed for tumor work must be available in quantity and capable of thriving under laboratory conditions and its spontaneous growths must be transplantable.

Some two years ago he succeeded in transplanting a spindle-celled sarcoma and has since observed this same tumor passing through 27 series or generations of fowl. First, he cultivated the tumor by transplanting it from one fowl to another, by the use of small particles or pieces of the tumor itself. He then prepared ground tumor tissue and succeeded in exciting a tumor growth by the use of the filtrate passed through common filtrate papers.

Not satisfied with this he proceeded to pass the macerated tumor material, held in suspension in a special solution through a Berkefeld filter, as experiment 4, quoted below will show.

"In this experiment the material was never allowed to cool. About 15 gm. of tumor from chicken 140 (generation 7 B) was ground in a warm mortar with warm sand, mixed with 200 c. c. of heated Ringer's solution, shaken for thirty minutes within a thermostat room centrifugalized, and the fluid passed through a filter similar to that used in experiment 3. Both before and after the experiment this filter was found to hold bacillus prodigiosus. The filtration of the fluid was done at 38.5 C. and its injection immediately followed. In four of ten fowls inoculated with the filtrate only (0.2 to 0.5 c. c. in each breast) there has developed a sarcoma in one breast; and though the growths required several weeks for their appearance their enlargement is now fairly rapid. Pieces removed at operation have shown the characteristic tumor structure.

"As has been pointed out, the special significance of these results lies in the growth's identity as a tumor.

"The original sarcoma was found as a unique instance in a flock of healthy fowls; and though susceptible normal chickens and others with the tumor have since been kept together in close quarters for long periods, no instance suggesting a natural infectivity of the growth has occurred. When inoculated, it is at first a local disease, very dependent on the good health of the host.

"Histologically, the growth has always consisted of one type of cells, namely, spindle-cells in bundles, with a slight, supporting connective tissue framework. The picture does not in the

least suggest a granuloma; and cultures from the growth remain sterile as regards bacteria." (*Jour. A. M. A.*, Jan. 21, 1912).

After having been able to develop this growth from the filtrate his next experiments were undertaken to show what favored the taking on of the tumor formation at the time the virus was injected. In his article, "The Role of Injury in the Production of a Chicken Sarcoma by a Filterable Agent," he draws these conclusions:

"The tumor produced by the injection of a Berkefeld filtrate of our transmissible chicken-sarcoma is first noticed as a minute nodule at some point in the track of the injecting needle; and only a small proportion of the fowls injected develop the growth. On the other hand when the causative agent has been introduced in the form of dried and powdered tumor-tissue, suspended in Ringer's solution, the sarcoma appears as a more or less diffuse mass at the site of injection; and it is found in many of the fowls. *These facts have led us to suppose that the filterable causative agent requires for its action a cell-derangement or proliferation*, such as the needle-prick or the presence of dried tissue induces. Experiment shows that this is indeed the case."

"The effect of the filterable agent when injected into the blood-stream was now taken up. It was found that when a large quantity of an active Berkefeld filtrate, free of foreign particles, was injected into the circulation, a tumor seldom resulted (four cases among seventeen). The sarcoma arose more frequently when a little diatomaceous earth had been added to the filtrate, seven out of twenty fowls then developed the growth. Apart from these figures, the site of the tumors arising after the injection of filtrate free of foreign particles demonstrates the importance of cell-derangement.

During the past three years we have kept at one time or another in relatively close quarters, over 1,200 chickens, many of them with the sarcoma. To some the fresh sarcomatous tissue has been fed, and many must have been contaminated with the dried tissue, in which, as we have found, the causative agent will remain active for over seven months. Trauma and other types of injury have been frequent among these chickens yet not one has developed the sarcoma except when directly inoculated. (*Jour. A. M. A.*, June 8, 1912).

"Although the filterable viruses have but recently come to attention, it is known that they are of very diverse character and that, except as a matter of expediency, they can scarcely be discussed together. At present each constitutes a separate problem. This is especially true of the filterable agent which causes a sarcoma of the fowl. *The disease is so different from the ordinary infectious processes that nothing can be preassumed with regard to the character of the etiologic agent.*

"The most direct means of proving that the agent is alive is to grow and transfer it in culture. Recently we have done much work in this direction without success.

"The conditions under which the agent can survive have much interest. It may retain its activity in dried tissue for seven months, and for at least one month in tissue placed in 50 per cent glycerin. In both instances it undergoes a gradual attenuation, as evidenced by the behavior of the tumors it engenders.

"Material which has been heated to 55 C. (131 F.) for fifteen minutes never gives rise to the sarcoma.

"Toluol and chloroform in the proportions employed to prevent bacterial growth during autolysis destroy it in less than two hours.

"No single attribute among those determined suffices to show the nature of the agent; yet, taken together its characters are those which we associate with microorganisms." (*Jour. A. M. A.*, June 22, 1912).

While attending the Surgical Congress in New York this fall I saw some of the work done by Rouse and his collaborators when visiting the Rockefeller Institute. I saw the specimen of spindle-celled sarcoma referred to in the articles mentioned in this paper. He also demonstrated the osteochondrosarcoma mentioned in his recent article as being the second tumor to be produced by the active virus contained in the filtrate from a Berkefeld filter proven imperious to the *B. fluorescens liquefaciens*. This tumor will reproduce itself by inoculation according to the regulations of tumor No. 1 each time producing cartilage and bone along with a few spindle-celled sarcoma cells. While in some ways it acts a little different than the first tumor it ultimately substantiates the findings of the first that, at least the tumors of the fowl are possible of reproduction by an extrinsic virus

separable from the tumor cells of the parent growth.

"The demonstration that extrinsic agents are the cause of two connective tissue growths of the fowl which are characteristic malignant tumors renders it necessary to suppose either that the tumors of the fowl have an entirely different etiology from mammalian tumors, or else that the latter are of similar origin. In any case the findings with the chicken tumors largely demolish the theoretical basis on which objections to an extrinsic cause for cancer have been built up." (*Jour. A. M. A.*, Nov. 16, 1912).

"The conditions which determine the curious relationship between the disease and its cause are of much interest. How does it happen that the sarcoma, though ultimately dependent upon an extrinsic agent is dominated in its behaviour by the cells composing it? Some simple reasons suggest themselves. In the first place, the agent's action to produce a neoplastic change takes place with extreme slowness as compared with the proliferation of the cells, once they have become neoplastic. The possibility of immune processes effective against the agent when separated from the cells must be kept in mind. *The immune processes thus far recognized have been directed against the cells themselves, as is the case of mammalian tumors.*" (Rouse, *Jour. A. M. A.*, June 15, 1912).

Carrell using some of Rouse's tumor material has made some experiments in the cultivation of the tissue outside its host.

"Four series of cultures were made with *fragments* extirpated from the animals in four different operations. The cultures started to grow after a very short latent period. While normal tissues of adult dogs and of young kittens began to develop respectively about forty-eight hours and twelve hours after inoculation of the plasmatic medium, sarcomatous tissue of the chicken showed, in some cases, evidence of activity after two and one-half hours. It showed that the new growth was partly built of cells wandering from the original fragment into the plasmatic medium.

"These results show that sarcomatous tissue grows luxuriantly outside the organism, that a second generation can be produced by the cells grown on the first culture and that the whole process can be observed with ease at every in-

stance of its evolution. It is probable that the malignant tumors of the human organism can, in a similar manner be caused to grow outside the body. The method, therefore, will be a valuable addition to our means of studying the problem of cancer." (Carrell, *Jour. A. M. A.*, Oct. 29, 1910).

Vaughn of Detroit, following the inspiration of the ferment possibilities has been experimenting with a specially prepared cancer protein. His recent article deals largely with the reaction of the white blood cells to the hypodermic injection of his sensitized cancer protein. Briefly stated he gets an increase of the mononuclear cells, determined by a differential blood count, as high as 30% per count, after an injection of the cancer preparation.

"When this work was first begun, it was based on the belief that it is possible to compel the human body to form specific ferments for the splitting up of any given proteid by the introduction of that specific proteid, as such, in a dead form, within the human body." He looked for the evidences of reaction in the changes noted in the white blood cells.

He found by study of his cases treated that the disappearance of the tumor cells depended on the relative proportion of mononuclear leucocytes present, together with the amount of cancer tissue present. He was not able to determine by a microscopic study of the tumor anything that would give him information as to how much vaccine should be used in a given case. "My contention is that the pathologist is not always able to state the degree of malignancy of a given tumor by an examination of it, but that a differential leucocyte count will give more accurate information on the subject.

"This conclusion is drawn from experimental work in injecting in various ways some 500 sheep and rabbits with cancer residue and vaccine with the universal result that all except ten animals gave an invariable relative mononuclear increase of from 100 to 400%. Serum injection from sensitized sheep and rabbits when injected into the human in inoperable cases gave such violent reactions and unfavorable symptoms that the further use of the serums was discontinued. In its place an effort was made to get a solution of the active virus from the washings of the blood cells obtained when the mononuclears were at their highest." (*Jour. A. M. A.*, Nov. 16, 1912). Vaughn, in the rabbit, has

succeeded in duplicating the work of Rouse in obtaining a filtrate which passed through a Berkefeld filter, after the cells had been specially ground and washed, gave an active ferment, while the residue left on the filter was inactive. A filtrate prepared in the same way from a normal rabbit would give no results. This shows that the cancerous animal possesses something in the mononuclear cells that the normal animal does not possess. The reaction obtained by Vaughn is similar to that shown by the meiostagmine reaction of Ascoli in that carcinomata and sarcomata interact in the same chemical way one with the other and vice versa. Vaughn has used this washed virus in the human with some satisfaction but does not wish to propose its general therapeutic use, but does ask that corroborative experimental work be done by competent men to either disprove or substantiate his results. He keeps his cancer material in alcohol until he wishes to prepare his ferment; then he makes a fresh solution. The fact that the tissue can be kept for a long time in alcohol would argue that it could not be caused by an organism of the order of bacteria as we know them today.

A CONSIDERATION OF THE EFFECTS OF ALCOHOL WHEN USED AS A MEDICINAL AGENT.

BY

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In presenting this subject for your consideration, I am aware of the gravity of the undertaking, of the enormous accumulation of literature upon the subject, of the controversy that occurred during the latter half of the nineteenth century, of the advent of experimental pharmacology which has given to the medical profession a more rational therapeutics.

It is to the discoveries of the present century relating to the effects of alcohol that I call your attention. I shall endeavor to present the evidence as furnished by the foremost investigators and observers, that I may give you the last word of science regarding this drug. I trust that the origin of this evidence will have sufficient consideration and that you will lay

aside personal opinions, that your judgment may be able to place alcohol in its relative position in your armamentarium.

Origin. Ethyl alcohol (C_2H_5OH) is a liquid produced by a microscopic plant, the yeast fungus, while feeding upon a saccharine liquid.

This unicellular microscopic fungus contains within its boundary wall an enzyme called zymase which is never excreted and performs its work as an intracellular ferment. This fungus, while feeding upon the saccharine fluid absorbs dextrose which comes in contact with zymase. This contact results in the splitting up of dextrose into ethyl alcohol and carbon dioxide, both of which are thrown off as waste products of excretion.

Vaughn says: "It is true without exception so far as we know, that the excretions of all living things, plants and animals, contain substances which are poisonous to the organisms which excrete them." Alcohol being an excretion of microscopic plant life is a toxin and would act as a poison to the plant excreting it, causing its death. This has been found true, for the yeast plant dies from its own excretion when the media has reached an alcoholic strength of 12 to 14%. He further states that "Not only are certain excretions poisonous to the organisms which excrete them but it has been shown that they are also toxic to any organism of higher rank." Therefore, alcohol which acts as a poison to the cell producing it, must necessarily act as a toxic substance upon the organisms of higher rank.

A Normal Product of Metabolism. Maignon, from a careful chemical examination, found traces of ethyl alcohol in the muscles, tendons, heart, liver, spleen, kidneys, lungs, testicles, skin, brain, blood and urine of normal dogs, horses and guinea pigs, and from further research, he determined that it was formed from the glucose of the muscles and tissues and through oxidation, was changed to acetic acid which, upon combustion, produced carbonic acid and water.

Therefore alcohol must be considered as a chemical product formed from the carbohydrates during their transformation into energy, traces of which must necessarily be found present in the body.

Threshold Dose. One or more drops of undiluted alcohol produce a local effect upon mu-

cous membranes which is capable of influencing the central nervous system.

The question arises, how much alcohol must be present in the circulation to produce the slightest departure from the normal, so that a competent observer might be able to detect an influence upon the nervous system? In other words, there must be an amount which could be in the circulation of an individual without its producing any appreciable effects, noticed by the individual or by others. This threshold dose has been estimated by Abel at one-third ounce of alcohol, which would be equivalent to two teaspoonfuls. The reason for the apparent absence of action is due to the great dilution and its distribution by the circulation to all parts of the body. When this amount is exceeded, then a departure from the normal brain and nerve processes takes place, which will be considered later.

Absorption. Alcohol may be absorbed by the unbroken skin by first dissolving its only protection, which then permits its access to the cells of the sweat glands where absorption can readily take place.

It is rapidly absorbed by all the mucous membranes and the subcutaneous tissues. Sollman states that 50 c. c. of a 20% solution disappears from the stomach of a dog in less than a half hour. Voltz, Brandrexel and Dietrich have determined that it is absorbed from the urinary bladder, 25% of the amount present being absorbed in one hour, 50% in two hours and 95% in six hours.

Cutaneous System. Its effect upon the unbroken skin depends entirely upon the strength of the solution used. It has an irritant action which becomes more marked as the solutions increase in strength. A cool sensation is produced by solutions under 50% which is due to the rapid evaporation. This is followed later by a sense of warmth. In solutions over 50% its irritant action appears to predominate which is characterized by redness, which is due to vasomotor paralysis, itching and a feeling of warmth.

In open wounds its irritant action is more prominent, causing a precipitation of the proteins and, should the solution be strong, a true corrosion of the tissue. This causes discomfort or pain depending upon its strength.

Nervous System. Peripheral. From our knowledge of alcohol, we are certain that it is capable of exerting an influence upon the per-

ipheral distribution of the nervous system. A substance or agent which so acts upon a sensory nerve is called a stimulus and a stimulus conveyed to the center produces an effect which results in a response. This we call a reflex act which is a motor response to a sensory stimulus. Alcohol from its irritating, dehydrating nature produces an effect which, acting as stimuli to the nerves with which it comes in contact, results in a response. This effect, however, must be produced while in contact with the skin, mucous membranes or tissues of the body before absorption takes place.

Central. The central nervous system, responding to external stimuli sent in by the local effects of alcohol upon the skin, mucous membranes, or tissues, becomes more active, just as a telephone operator at a central office becomes more active with an increase in the number of calls. Therefore these centers, having become active reflexly, have an increased amount of blood sent to their assistance; the result of which produces an improvement in the functions which are dependent upon them. Thus far we have explained the effects of alcohol before absorption has taken place. Now let us consider its effect after it is absorbed. Alcohol, after absorption, is classed by nearly all pharmacologists with the hydrocarbon narcotics such as ether, chloroform, chloral, etc. This classification has been made only after thorough experimentation at which time it was found to be like them. Alcohol, being so classified, must necessarily have a like action upon the nervous system. Meyer and Overton brought forward the accepted theory regarding the action of the hydrocarbon narcotics upon the nervous system, namely, that these agents produce a solution of the lipoids present within the nerve cells, thereby lessening and finally abolishing their function. If their function is lessened and finally abolished then alcohol must act as a depressant to these structures after absorption.

But you might say that this influence upon the higher cells caused by solution of their lipoids might increase their functional activity. In answer to this question it can be stated that lipoids are normal constituents of nerve cells which are utilized in the metabolic changes taking place within the cell and upon which functional activity depends. Therefore, if any amount, small or large, should be changed by a highly volatile substance such as alcohol, chloroform or ether,

then the cell would not have as much to utilize during metabolism and functional activity would be lessened. Also the presence within the boundary wall of a foreign substance, i. e. solution of lipoid in alcohol, would also hinder its functional activity.

The first centers to become effected are those which deal with those faculties obtained by education such as judgment, reflection, observation and attention, all of which become impaired. These faculties control the mental processes and acts of the lower centers, and, upon becoming impaired, remove the restraint, permitting them to have full sway.

We next notice the development of self-confidence, and as a result, fluent speech, an apparent possession of unlimited powers both mental and physical, which is characterized by attempting impossible tasks, the individual often thinking that he accomplishes them.

Thus, we see that in the smallest dose, alcohol acts by depressing the higher intellectual centers which results in the apparent activity of the lower centers which have been removed from restraint. This, to the uninformed, is taken to be a stimulation of the cerebrum while in reality it is a depression.

A circular letter sent out by a commission to the leading brain workers of the United States inquiring into the effect upon mental effort, resulted in a consensus of opinion that "On the whole it gave bad results."

York states "It is a narcotic, a stupefier and not a true stimulant like coffee or strychnine."

Thompson sums up its effect upon this system by saying "Probably not an excitant at all but simply a depressant and acts by removing the bonds of restraint."

Kraepelin's experiment upon composers, showing the effect of alcohol in small doses furnishes conclusive evidence. This experiment showed that they made more mistakes with the alcohol than without it though they fancied they were doing their work better. Comprehension and observation were impaired which lasted from 4 to 48 hours.

Abel, in summing up the evidence, states that "In general then, mental processes which involve the working up of conceptual material are not favored by moderate quantities of alcohol."

Muscular System. If a drug is to exert an influence upon muscular tissue, it must do it indirectly by an effect upon some portion of the

nervous system or directly upon the muscle substance. In considering the effect upon the nervous system, it was found that before absorption it did have a stimulating effect upon this system with, to a certain extent, a resulting increase in functional activity of structures depending upon it. Therefore, before absorption, reflexly it may increase muscular activity, but alcohol is rapidly absorbed and this increased activity is transient, for as soon as absorption takes place it directly affects the nervous system and a depression of muscular activity results.

Thus far, so far as I know, no evidence has been produced to show that alcohol after absorption has any direct action upon muscular tissue increasing its activity while evidence is to be found which proved that it depresses its activity.

Abel found that alcohol increased muscular activity when the muscles were vigorous and also when fatigued and states "This favorable and stimulating action is seen almost immediately after administration of the alcohol but lasts only a short time. A paralyzing action always succeeds the stimulation. In about a half hour after the administration of the alcohol the work done reaches the minimum and fresh doses of alcohol show only a slight stimulating action. The later paralyzing action of alcohol overbalances the primary stimulating effect in such a way that the sum total of the amount of work done with alcohol is less than that done without it. Similar depressing effects are not seen to follow the use of tea, coffee or kola."

Foerster illustrates the fact that in practically all cases, the first stimulation by alcohol is followed by a diminution of the irritability and functional capacity. He calls attention to three important factors which seem to have an important bearing on this subject and may be the reasons why some maintain that alcohol increases muscular activity after absorption.

"First, the fact that unpleasant sensations, as well as the ideation-complex connected with the onset of fatigue may be removed or at least diminished and changed by alcohol.

Second, the pains due to inflammatory processes which occur under exaggerated function of muscle are rendered less perceptible and distressing by alcohol.

Third, the work done under alcohol is indirectly increased and influenced through associa-

tion of ideas and suggestions such as take place especially in the meeting of numerous individuals, through mental excitement, under the influence of enthusiasm."

It may be of interest to review the opinions of eminent men who have observed its effect upon men who have been subjected to excessive muscular activity under trying circumstances. This evidence is not theoretical but it is practical and should have great weight in influencing our decision.

Sir Frederick Treves states "I was, as you know, with the relief column that moved on Ladysmith and, of course it was an extremely trying time by reason of the hot weather. In that enormous column of 30,000 the first who dropped out were not the tall men or the short men or the big men or the little men, they were the drinkers and they dropped out as clearly as if they had been labeled with a big letter on their backs."

Greeley, during his polar expedition states "The subject of alcohol was frequently and generally discussed during the winter at Cape Sabine and all without exception concurred in the opinion that spirits should be taken after a day's labor was over and not before or during exhausting work, nor while suffering from exposure which was to be continued."

Stanley says, "In the tropics I advise no one during the hours of daylight to touch liquor unless a medical man prescribes a certain quantity to be taken when it is absolutely necessary."

Dr. Blessing, who accompanied Nansen's expedition states, "The heavy requirements on the system made by bodily exertion, forbid the use of stimulants but the monotony of life and the absolute lack of new and diverting impressions made its use very desirable."

In the Austrian army, where soldiers are stationed in the Alps and where hard physical and mental work is to be done, such as mountain climbing, exploring glaciers, etc., absolute abstinence from alcohol is required.

Respiratory System. This system can be influenced directly by an effect upon the respiratory center in the medulla or indirectly by reflex stimuli to the center or by an increase in the blood supply to the medulla.

First, let us consider its local effect when in contact with the mouth, esophagus and stomach. Being highly irritant, a multitude of reflex stimuli are sent to the centers of the medulla

which must necessarily stimulate them to increased activity. This is an indirect effect, coming on immediately, but passing off during absorption of the alcohol to drop below normal as soon as its direct action takes place. Therefore, alcohol is a reflex stimulant to the center of respiration but, from its inherent nature, becomes a depressant to that same center after absorption, death from a toxic dose being due to a paralysis of this center.

Cushney states, "There is, therefore, no sufficient evidence that the respiratory center is directly stimulated in man, and the increase in the amount of air inhaled may be due to the peripheral action of alcohol."

Abel refers to its reflex action by saying, "Alcohol is a respiratory stimulant of moderate power for human beings. During a period of one hour or more after its administration, it causes an increase in the volume of air passing through the lungs and in the absorption of oxygen." These statements remind us of its effect upon all the systems thus far considered, namely, a reflex stimulant before absorption which, after absorption, is changed to depression.

Circulatory System. It is upon this system that a difference of opinion exists among clinicians. Recent work adds but a little to the great mass of evidence from which we must draw our conclusions.

Pulse. The pulse rate is not changed providing the alcohol is so diluted that its local irritant action in the mouth and stomach is avoided. If irritation does occur reflex stimulation of the medulla is produced which increases the activity of other organs, and an increase in pulse rate results.

Thompson thinks that a small quantity of alcohol, not to exceed .2% of the blood would exert a nutrient effect upon the heart muscle which, in conditions requiring nourishment, might assist its action. However, an excess of .2% even by a small per cent produces an injurious effect.

Martin and Sheridan concluded from perfusing an isolated dog's heart with a .25% alcoholic solution that the rate was increased and the amount of work diminished, the heart returning to normal upon the withdrawal of the alcohol.

Vernon, in perfusing the heart of a tortoise, found that alcohol caused a depression which increased with the concentration and that washing out the alcohol with Ringer's solution pro-

duced a complete recovery.

Downs concluded from experiments with solutions of alcohol varying from 1 to 50%, locally applied to frogs hearts, that with the exception of 1 and 2%, a depression of activity resulted. That with 1 and 2% the increase in pulse rate was due to paralysis of the inhibitory mechanism, as evidenced by electric stimulation.

Blood Pressure. The blood pressure appears to be unchanged from moderate doses while larger doses produce constant fall due to vasodilatation and depression of the vasomotor center.

Abel states, "If muscular movements are avoided the blood pressure remains practically unaffected by small quantities."

Wood says, "When alcohol is introduced into the blood stream in moderate quantities, alteration in the blood pressure is insignificant and if larger doses are given, it produces a fall."

From the evidence we can conclude that indirectly by reflex action, alcohol is capable of influencing the pulse rate and, to a certain extent, the vascular apparatus, while a direct action after absorption from quantities far short of intoxication has a depressing action upon the heart.

Therefore the term "circulatory stimulant" should apply only when the vascular apparatus is influenced reflexly, before absorption takes place. After absorption, from its inherent nature, it becomes a depressant.

Digestive System. Mouth. The presence of alcohol in the mouth causes an increased secretion of saliva due to its irritant action. This increase does not occur if alcohol is introduced into the stomach through a fistula, thereby showing it to be a reflex act.

Stomach. A like action is seen when in contact with the stomach wall. The circulation is increased as well as the movements, this causing an increased flow of gastric juice.

Sollman thinks that in solutions of 1 to 2% peptic digestion is increased. From 2 to 15% little or no effect is noticed. From 15 to 18%, it is diminished by one-fourth and that 20% strongly inhibits digestion.

Cushney claims that alcohol injures the activity of the ferments, the deleterious effect being largely overcome by the increased amount of gastric juice and increased movements, the result being negative.

It would seem from the increased flow of saliva and gastric juice, the increased circulation

and movements together with the warmth in the stomach and the mental attitude of the individual, that digestion and absorption would be hastened, providing its strength is kept below 2%. This would require an equal amount of diluent in the stomach when beer is taken and about six times the amount if wine is taken, but Bleim, in discussing its action upon digestion, concludes that it "excites the gastric glands to increased secretion which is deficient in peptic elements and soon degenerates to a mucoid flow." If the increased secretion is deficient in ferments and the gastric juice becomes a mucoid diluent, then digestion would become impaired.

Kemp, in his text book on Diseases of the Stomach and Intestines, says: "Alcoholic wines are recommended by many as a mild stimulant to the stomach in certain cases, but from personal experience, I advise against their use. There are other remedies which give better results."

Intestine. That alcohol promotes intestinal toxemia is held to be true by Bleim who states that "Indican is always found in the urine under its use."

Urinary System. This drug has little or no effect, to increase the amount of urine, when given in small amounts or when well diluted. The diuretic action of a pint of beer is no greater than a pint of water, showing that it is the water content which must be considered as the important factor.

Large quantities of alcohol, however, cause a diuretic action by local irritant action during the process of excretion.

Sexual System. Very little need be said regarding the effect upon this system. An effect is noticed which to the uninformed might appear to be a stimulation. However, upon close investigation, it is found to be due to a depression of the higher intellectual centers with a loss of selfcontrol. With increasing doses, this passes on to complete impotence.

"Alcohol," says Ivan Bloch, "is the evil genius of modern sexual life."

Brodrick sums it up by saying "It stimulates desire and hinders its fulfillment. It creates unwholesome sexual appetite which seeks criminal gratification."

Glandular System. The secretions from the salivary, gastric, pancreatic and intestinal glands are increased during the local contact of alcohol with the gastrointestinal mucous mem-

branes. Upon absorption, this increased activity lessens and soon falls to normal.

Hertoge and de Quervian have concluded that alcohol exerted a harmful influence upon the thyroid while Sajous claims that the ductless glands as a class are greatly hampered by its use in any but a very weak solution.

Senses. The senses are often increased reflexly, while later the reverse becomes true, as voiced by Abel when he says: "On the senses a sedative or depressant action."

Metabolism. Time will not permit a discussion of alcohol in its relation to metabolism. This alone would consume a whole evening. However, it is of great importance that the general practitioner become acquainted with a few facts.

Temperature. There is a constant fall in the body temperature which is due to the increased radiation of heat from peripheral dilatation of the cutaneous circulation, also from depression of the center in the medulla.

This increased radiation of heat is recognized by the individual and to him it appears as a general increase in temperature. From delicate tests it has been determined that the peripheral temperature is increased but it is produced at a sacrifice of the internal heat, the maintenance of which is so essential to the vital functions.

Resisting Power of Red Blood Cells. The resisting powers of red blood corpuscles has been investigated by Fillinger who experimented upon two healthy young men. The resisting quotient before champagne was 88 and after was 43. He observed a like condition of the red blood cells in a dog and a rabbit.

Laitinen confirmed the findings of Fillinger by noting the diminished resistance of the red blood corpuscles of rabbits against a heterogeneous serum.

Opsonic Index. Abbott and Gildersleeve, experimenting with rabbits, found that alcohol caused a rapid lowering of the opsonic index and that alcohol with muscular fatigue, a still greater drop. Also that infection with pyogenic bacteria was easily produced as compared with the normal.

Reaction to Vaccine. Parkinson, in experimenting upon alcoholized rabbits to determine their reaction to vaccine, found that it was less effective than upon the normal and with the living microorganisms, a still greater drop was noticed.

Body Resistance. From all sources comes the evidence that the body resistance is lowered by this drug. Thus Thompson, in his discussion of the subject states that "It is also quite certain that the resistance of the body generally to the inroads of disease is lowered particularly in regard to pneumonia and cholera.

Jones, in reporting a series of eighty-six cases of pneumonia, thirty-six of which received alcohol as compared with fifty who did not receive it, states that the mortality of the former was 38% while that of the latter was 18%.

Excretion. While at rest 95% of the amount ingested never reaches the avenues of excretion except as decomposition products. Five per cent is excreted by the kidneys, a small amount by the lungs and a smaller amount is found in the milk. The sweat and feces never contain alcohol.

Voltz and Brandxel, from experiments upon dogs, have determined that increased activity increases the amount excreted. The dog, while at rest excreted about 3% in the urine while during the period of activity, excreted 9.5%.

An increased elimination was also noted from the lungs. The dog breathed out five times as much during activity as compared with a like period during rest.

Attitude of the Medical Profession. There are among my hearers those who accept this evidence as conclusive proof, others who, from previous instruction, accept it in part and still others who from instruction and from misinterpreted observations, are inclined to discredit the statements made. In anticipation of this, I desire to give you the opinion of the medical profession as evidenced by statistics collected from all parts of the country.

In a circular letter sent out by Allen to three hundred medical professors in the United States, inquiring into the attitude of their college toward the subject of alcohol, sixty-three replies were received. Of this number, "thirty-four teach that there is little or no use for alcohol in disease; nine regard it as a stimulant under certain conditions; seven speak of it as a food in some cases, nearly all said it should never be given to children."

Prof. Sims Woodhead of Cambridge University has said: "It is now admitted that alcohol is not a stimulant but a narcotic, a deadener of sensation and a depressant of function."

Dr. Frank Billings of Chicago states "The

belief in alcohol as a stimulant is rapidly passing away."

Dr. Harvey W. Wiley has said, "Both as a means of preventing disease and as a remedy, this agent (alcohol) is rapidly falling into disrepute so that it bids fair to become merely a memory in our materia medica and the pharmacopoeia."

The Massachusetts General Hospital at Boston is the largest in New England. In 1900 they spent for alcoholic liquors \$2,410 to care for 5,012 patients, while in 1907 they spent \$813 to care for 5,966 patients. The average cost per patient in 1900 was 48 cents while in 1907 it was 13 cents.

In Bellevue and allied hospitals of New York in 1903 they spent \$1,905 to care for 36,332 patients while in 1907 they spent \$1,030 to care for 42,815 patients. The average cost per patient in 1903 was 52 cents while in 1907 it was 24 cents.

In the Cook County Hospital at Chicago in 1904 they spent \$1,002 to care for 23,931 patients while in 1909 they spent \$866 to care for 33,891 patients. The average cost per patient in 1904 was 42 cents while in 1909 it was 25 cents.

Reports from the hospitals of England show a like result. In 1902, St. Bartholomew's, Guy's, St. George's, St. Mary's University College and Westminster had 2,275 beds and spent 3,740 pounds for liquors, while in 1912 with 2,309 beds they spent only 2,925 pounds.

A like report comes from the hospitals of Vienna and Berlin.

I trust you will pardon a slight digression from the title of this paper that I may give you a glimpse of the reaction that is now taking place among the people.

Attitude of the People. The knowledge obtained from scientific experimentation together with its adoption by the foremost of the medical profession as indicated by the above reports, has made a profound impression upon the governments of some of the foreign countries.

The English Government has placarded the streets of all her principal cities, setting forth the evil effects of alcohol, even in small amounts, asking her people in the name of the nation to abstain from its use.

France attributes her decline of birth rate and increase in death rate to the common use of alcoholic beverages. She has followed the ex-

ample set by England and has likewise placarded all large cities of her republic.

In 1909 the social-democratic party of Germany, composed largely of the working people, adopted a resolution setting forth the evil effects of alcohol and asking its members to avoid its use. This has resulted in a decrease in the consumption of whiskey by 11,360,600 gallons per year.

A prominent railway system has recently forbidden the use of alcohol in any form and at all times, by their employees. They say that they will not permit the use of an agent which "will impair their health or make them less alert or less capable while on duty."

It was but yesterday that the medical profession and, by their teachings, the people, looked upon alcohol as a wonderful stimulating agent, the use of which increased the activity of both mind and body, reinforcing the heart, lessening fatigue and improving nutrition. To-day all is changed. From the laboratories of pharmacology, physiology and chemistry, together with accurate observations by competent observers, have come scientific findings that alcohol, after absorption, is a depressant.

The question now arises, should alcohol be referred to as a stimulant? We grant that from its local action the activity of internal structures is influenced but this activity can be produced by many agents, none of which are ever referred to as a stimulant.

Mustard, applied locally exerts a powerful influence upon internal structures, likewise cantharis, croton oil, ether, chloroform, etc., yet who would think of classing them as stimulants?

Alcohol, applied locally should be classed as an irritant or corrosive, depending upon its strength and when present in the circulation it should be classed as a narcotic.

The Duty of the Physician. If we accept this evidence as conclusive proof that alcohol is a depressant, then we must be perfectly frank with our patients.

The people look to the medical profession for the preservation of their health as well as to its restoration when it becomes impaired.

As a profession, we have been fighting the use of such habit forming drugs as opium, cocaine and chloral, all of which have a field of usefulness which at times necessitates their use. Here is a drug, alcohol, a habit forming drug, the effects of which are oftentimes more disas-

trous and which can be dispensed with as a medicinal agent, yet the medical profession seldom utters a word of protest.

Gentlemen, should it be necessary for the people to go to the clergy, the academic teachers and a few enthusiastic women to learn the truth regarding alcohol, or should we, who are in possession of the facts, become the educators of the people?

SUMMARY.

Alcohol is a toxin produced by the yeast fungus and thrown off as a waste product of excretion.

Alcohol is formed in the body from the carbohydrates during their transformation into energy.

The amount circulating in the blood which would produce a departure from the normal brain and nerve processes is about 10. c. c.

It is absorbed rapidly from mucous membranes, subcutaneous tissues, bladder and even the skin.

It increases the activity of internal structures, before absorption, by its local irritant action.

It produces, after absorption, a depression of the nervous system and those structures dependent upon it.

It causes a drop in the temperature of the body, lessens the resisting power of red corpuscles, lowers the opsonic index and lessens the body resistance.

It is excreted largely by the kidneys, a smaller amount by the lungs.

It should never be referred to as a stimulant but as an irritant before absorption and a narcotic after absorption.

The foremost of the medical profession and medical institutions are rapidly eliminating its use as a medicinal agent.

It produces death by a paralysis of the center of respiration.

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ATHLETICS AND HEALTH.

University athletics and the conduct of inter-collegiate contests should receive a more serious consideration from those who assume responsibility for these features of American college life. Too often any criticism of long-established practices is resented or ignored because it would abolish or modify some firmly implanted customs. Only after years of patient unremitting effort has the plea for a "safe and sane" Fourth of July led to a reform which will soon evolve into a nation-wide plan of rational celebration. Persistent exposure of the dangers of reckless football contests with their attendant fatalities cannot fail to bring welcome changes sooner or later. This is a most timely moment in which to inaugurate a campaign against athletic recklessness. Conservation is the keynote in campaigns of progress in all departments of national activity. Propaganda for the conservation of health and life is directly furthered by this more general spirit of the times. If college athletics of to-day are a menace to health, they cannot escape the attack

of those who are alert for every evidence of human extravagance and waste. The enthusiasts for physical education have hitherto failed to emphasize the important distinction between those strenuous performances which tax the capacities of the body to its utmost (comprehended in the term "athletics"), and that exercise of the bodily functions more appropriately included under the designation "physical education." Europeans have a far happier expression for the employment of their bodily activities in the word "sport," which implies the combination of a healthy spirit of pleasure and satisfaction with what we call exercise. Such an attitude is almost unknown here. Instead there exists a form of overdoing that finds its chief reward in the applause of the multitude rather than in the joy of the performance. "Athletics" have long been under the dominance of so-called "trainers," frequently men of keen judgment and technical skill, but usually persons without any systematic acquaintance with physiologic truths. Their sole concern is to turn out a winning team or a victorious athletic giant. The best intellectual feature of rival contests—the encouragement for each man to put forth the best that is in him and to exercise his own ingenuity in the development and maintenance of an efficient, superior body—is suppressed by the advent of that guardian saint, the trainer. It can be freely admitted, says *The Journal of the American Medical Association*, that the cultivation of physical intelligence furnishes a valuable asset to man in developing co-ordination and promoting health and happiness. But when the results of vigorous sports or exhausting struggles are involved, something more than a "pardonable pride in an expanding chest and swelling biceps" should furnish the guiding motive. The obvious abuses of athletics must be threshed out.

When your finger in the rectum outlines a hard, fixed, stone-like mass, you may be sure you have a cancerous prostate to deal with.

The resin of podophyllum is apt to nauseate some persons when given in effective doses.

Vermont Medical Monthly.

A Journal of Review, Reform and Progress in the Medical Sciences.

H. C. TINKHAM, M. D., }
B. H. STONE, M. D., }.....*Editors.*

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EDITORIAL.

A document of much interest which has been noted to some extent in the daily press is Governor Sulzer's message on public health with a report of a special public health commission. This report is the result of the work done and the conclusions drawn by a commission appointed by the governor on January last to collect facts, receive suggestions and make recommendations as to the changes in the public health laws and their administration. The report is such a thorough review of the existing condition in New York and points out so clearly the weaknesses of the present public health organization and is so broad and comprehensive and untrammelled in its recommendations that we feel that it deserves wide publicity. The conditions in the Empire State resemble in a general way those in Vermont and the recommendations reached by the commission and further emphasized by the governor are many of such a nature that they might well be applied, we believe, to our own state. The governor preambles his message with the following paragraph. "One of the first duties of the State is to protect the

life and promote the health of its citizens. There is no more important subject of public administration than public health. The State comes very close home to the individual when it saves him from sickness and even from death. This, it can do, does do, and should continue to do in a much larger degree."

The most important of these recommendations are as follows:

1. That the term of office of the State Commissioner of Health (corresponding to our Secretary of the State Board of Health) should be six years with a salary commensurate with the importance of the office which is in this report recommended as \$10,000 per annum. That this commissioner should be a physician or a recognized authority on public health work and should not be permitted to practice medicine or occupy any other position which may interfere with his official duties.

2. That there be a public health counsel of seven members which should be made up of the commissioner of health; the commissioner of labor; commissioner of education; one member to be designated by the governor from the health officers or health commissioners of some city of the first or second class and three members at large appointed by the governor. To this counsel is to be given the authority to adopt health regulations but no executive, administrative or appointive powers.

On the commission of health is to devolve the duty of supervising all local health authorities (except in the City of New York) and the enforcement of public health laws.

3. The State (outside of New York City) is to be divided into at least twenty sanitary districts for each of which a sanitary supervisor is to be appointed by the commissioner of health. This officer is to devote his entire time to the official duties of the office and is to be paid by the state a salary commensurate with the im-

portance of the position and the necessity of securing a thoroughly trained sanitarian. The salary recommended is \$3,000.

4. The duties of the town and village boards of health are to be vested in town and village boards of trustees respectively. The local health officer is at present appointed by the local board of health and while the committee states emphatically that these appointments should be subject to the approval of the state authorities, they express some hesitation about the practicability of such an arrangement at the present time but suggest that the state public health counsel be authorized to establish qualifications of eligibility and conditions for appointment to the position of health officer for all subsequent appointments, thus ensuring a higher degree of efficiency in these officers. They recommend that the health officials of towns and villages shall receive an annual minimum salary equivalent to at least fifteen cents for each inhabitant of their village or town. Upon these officers falls the duty of (1) an annual survey and a continuous sanitary supervision of the territory within their jurisdiction; (2) the examination of all school children as soon as practicable after the opening of each school year; (3) thorough inspection of school buildings and all places of public assemblage and report on their conditions and needs, to those responsible for their maintenance; (4) popular education as to public health matters; (5) securing full reports of communicable diseases and full registrations of deaths and births; (6) the enforcement of public health laws and the recommendations of the public health counsel in the territory within their jurisdiction.

5. The passage of a model statute for the collection of vital statistics and the registration of births based on that recommended by the United States Census Bureau.

6. The authorization of each county, village and town to employ one or more trained nurses

to act as infant welfare nurses, school nurses, tuberculosis nurses and generally at the request of physicians or health officer to visit the sick who are otherwise unable to secure adequate care and to instruct other members of a household in the care of the sick and the prevention of infection and disease; these nurses to satisfy a standard qualification of eligibility established by the public health commission.

7. The establishment of a division of public health department such as child hygiene, public health nurses, etc.

8. The passage of a tuberculosis law which (a) authorizes nurses, teachers, landlords, and laymen generally to report to health officers for inquiry and examination any persons under their observation who appear to be suffering from tuberculosis. (b) Authorizes local authorities to employ trained nurses for the sanitary supervision of households in which there are reported cases of tuberculosis and for the discovery of unreported cases. (c) Requires local health authorities to initiate proceedings against physicians who fail to report cases. (d) Make the original report of a case by a physician as simple and easy as possible. (e) Provide for the compulsory removal and detention of careless tuberculosis patients and any others whose condition renders them dangerous.

Additional provision to be made by the state for strictly incipient cases of pulmonary tuberculosis.

9. Each county with a population exceeding 25,000, not otherwise adequately provided with local tuberculosis hospitals, to proceed at once and with all diligence to establish and maintain a county tuberculosis hospital.

10. The State Health Department to be provided with new laboratories with sufficient land and equipped with adequate facilities for making examinations and analyses for local health officers and for original research. It should

also be authorized to enter into contracts with laboratories in several portions of the state, conditional upon the maintenance of standards of efficiency outlined by the Public Health Council, for prompt examinations, analyses, and reports of specimens sent by local health officers.

11. Local authorities to be strongly and repeatedly urged to provide contagious disease hospitals (in addition to tuberculosis hospitals) with not less than one bed for every 2,000 of the entire population. The State Department of Health should be charged with the duty of periodically inspecting such hospitals and of reporting their conditions and needs to the authorities responsible for their maintenance and the Public Health Council should make regulations as to their administration.

12. The proposed Public Health Council to have power to regulate the practice of midwifery.

13. The written reports of public health officers, nurses, and inspectors on questions of fact under the public health laws of the state or under any state of local health regulations, to be made presumptive evidence of the facts so stated and receivable as such in all courts and places. The persons making such reports should be exempted from personal liability for the facts so stated, provided they have acted in good faith.

14. The educational work of the State Department of Health to be greatly extended and strengthened, particularly in the line of authoritative popular education as to the nature and methods of control and prevention of prevalent diseases.

15. By establishing standards of qualifications of public health officers and nurses and in other ways, the State Public Health Council to encourage the educational bodies of the state to maintain special courses of study and training in sanitary science and public health

work for physicians, nurses, engineers and others proposing to engage in public health work, in any of its branches.

16. At the earliest possible moment the records of the State Department of Health including the records of births, and deaths to be placed in a fire-proof building and the department should be provided with offices large enough to relieve the present congestion and to protect the health of its employees."

The part of this report which impresses the present writer as applicable with some variation to Vermont, is the appointment of a sanitary supervisor to have general oversight of the health matters of a district and the relegation of much of the work which is now done by the town health officers to this officer who could thus be paid a salary sufficient to control his whole time. The collection of vital statistics and the issuing of burial permits could be delegated to some local officer as the town clerk. We believe that some adaptation of this principle would work wonderfully for the efficiency of the public health administration in that it would make it possible to have fourteen trained sanitarians devoting their entire time to sanitary conditions of their respective counties in such a way as is impossible for the local health officer to do and this with a probable actual saving in dollars and cents over that now expended. Such a system is in vogue in Great Britain, where a specially trained physician having the degree of Doctor of Public Health is appointed for each district by the central government. The old town idea is a hard one to combat but matters of public health can not be limited in their effort by town lines and it is thoroughly rational that the administration of these matters be centralized.

The State Board of Health has placed a ban on the roller towel as was done some time ago

on the common drinking cup. These two relics of a fast disappearing unsanitary age have received their death blow. Action similar to that taken by our State Board has been taken by the boards of health or legislatures of a large number of the states and the interstate commerce commission has passed a similar ruling. We have been impressed with the small amount of protest and the large amount of favorable comment which this action and the one eliminating the common drinking cup has aroused. It simply shows the effect of educational work along sanitary lines. Any reasonable individual who understands the dangers of conditions of this kind naturally appreciates efforts at removal of these dangers and that the danger is pretty thoroughly appreciated is evidenced by the calm acquiescence of the public.

Newspaper accounts seem to verify the mercenary motives in Dr. Friedmann's visit to America. The doctor has apparently succeeded in his purpose, being able to carry back to Germany \$125,000 in cash and a large block of stock in a company which has been organized to exploit and sell the treatment. This organization is formed in such a way that it removes the control of the product from the Federal authorities to a large extent. It now devolves upon the states to look after the matter.

The Owens bill to establish a department of public health is again before Congress. The latest bill goes back to the original plan for a department rather than a bureau of health. It has been framed so that many of the conditions which gave rise to its opposition before have been changed. We sincerely trust that the bill will have a more successful issue with this Congress.

CLINICAL SOCIETY OF THE NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL.

MEETING OF APRIL 7TH, 1913.

Cases reported by Dr. Anthony Bassler:

1. Gastric carcinoma: Operation: Improvement. This case presented a few unusual features. A man of 70 first seen Oct. 14th, 1912. A moderate drinker. Present illness began with a severe cold after exposure followed by vomiting of a large amount of blood and the general symptoms of hemorrhage. Remained in bed one month. Up to last Feb. lost 50 pounds. Appetite was good but patient did not eat much because of distress after eating, especially after fatty foods. Vomiting was frequent but not constant, longest period elapsing between meal and vomiting was 10 hrs. Meat was removed from the diet and since then the bowels have been regular. Physical examination: Endocarditis, emaciation, stomach resistance, with visible peristalsis. Stomach analysis showed marked hyperacidity, no Boas bacilli or lactic acid. Blood present in stools almost constantly. Placed on a diet of 4,000 calories, consisting of milk and cereals and large amount of butter; the patient gaining one pound per day for 27 days, and gastric symptoms were relieved. The mass in the epigastrium remained the same, X-ray showing it distinctly. Gastroenterostomy was performed; the patient gained 13 pounds in six weeks and then 44 pounds in as many days. The diet is general now and all distressing symptoms have disappeared.

The interesting points are: Carcinoma with hyperacidity, marked improvement after gastroenterostomy and the beneficial use of 10 grs. of thymus t. i. d. Three other somewhat similar cases also treated with thymus showed marked improvement.

2. Case of persistent brachial neuritis and obesity; treated intestinally: Cure. This woman 57 years of age was first seen Oct. 2, 1912. Acute indigestion for a number of years with a brachial neuritis. Last summer the painful neuritis extended into arm. Eating of fresh fruits increased the pain. This is the so-called gluteal type of intestinal disturbance. There was pain in the left side of the abdomen. Gain in weight. Physical examination revealed an en-

docarditis, with occasional dropped beats, otherwise negative. A normal diet was arranged according to the age and weight of the patient and after three days urine showed a great increase in uric acid output and bacterial examination of the feces great numbers of bacillus erogenous capsulatus. A diet of farinaceous foods, olive oil, etc., and no meat was ordered, vaseline administered to regulate the bowels, alkaline drinks and a large dose every fourth day of the gram negative streptococcus intestinalis capsulatus was given to antagonize the erogenous bacillus. The entire situation now cleared up. After a few weeks the acid output became normal, there was a loss in weight of 40 pounds and the brachial neuritis disappeared.

Case 3. Case of arthritis deformans. Treated intestinally. Cure. This young woman, a teacher 34 years old, has had a chronic joint involvement of the hands and feet for the last five years, atypical hypertrophic polyarthritis with an occasional acute exacerbation. The stiffness has persisted. During the first attack she was markedly constipated, a psoriasis developed and the patient lost 15 pounds. Placed on a normal diet the urine showed a slight trace of albumen and the toxic substances, uresin, indican and a high oxidizing element. The stools showed abundant bacilli of putrefaction, and a gram positive diplococci. She was placed on a diet with the smallest amount of calcium salts and bowels regulated by bran and agar. The stools then showed seven distinct strains of coli communis. Once every four days the patient was given a very large dose of coli bacilli, later placed upon a general diet. Now under treatment for two and a half years and no further attacks of polyarthritis have been experienced.

Case of cerebellar tumor, reported by Dr. R. Foster Kennedy. Operation; recovery. A young man 18, violin player. Immediate history was illness after returning from a party. Continued to have occasional vomiting spells with violent headaches, and transient diplopia, and later inability to manipulate the left little finger. Then there developed unsteadiness in left leg. The ataxia became so marked that patient was barely able to walk and lurched to the left. Left arm became ataxic. Transient right facial paralysis, very severe headaches, especially in occiput. Examination: Compression pulse, below 60. Orientation good but rather drowsy, nystagmus to right and left, pupils equal and reacted well to

light and accommodation. Diminution of sensibility of right fifth nerve, hearing good, trace of weakness in face. Ataxia more marked in left arm and left leg. Both were atonic. Reflexes on left side were increased over those on right side. Abdominal reflexes absent. Right optic disc markedly atrophied and considerable old choroiditis. Left disc showed slight blurring. It was obviously a case of intrapontine cerebellar tumor; while the patient was under observation he collapsed, pulse 40, long sighing respirations, papillitis advanced rapidly. Nystagmus became coarse and irregular to left and absent to right side. Therefore tumor was confined to left cerebellar hemisphere. Operation by Dr. Elsberg. Cerebellum was exposed and it immediately protruded by its pressure, the pathological portions were removed. For three weeks the patient had an up and down course with finally complete recovery.

Case 2. Myasthenia gravis. This case presented some points difficult of diagnosis. A young girl of 17 always enjoyed good health. Her present complaint began when she started painting notions in water color. The casual relation, however, is not clear. Last October felt eyelid becoming heavy, and had difficulty in keeping it open. In one week it was entirely closed. Left now recovered and right had a similar course. Noticed that she began to see double, but the diplopia was not of a constant variety due to the fact that different ocular muscles were affected on different days and therefore the images were variable. On examination there is ptosis of both sides, more marked over the left eye. Compensatory elevation of eyebrows. Complete paralysis for downward movements of the eyes, movement of right eye laterally is good, of left the eye is almost nil. Upward movement of both eyes present. Right pupil larger than the left. Fundi normal. There are no other symptoms except those of the eye. Three possibilities must be thought of in a diagnosis. *First.* Inferior poliomyelitis of Wernick. The gradual onset of two weeks and the intactness of the other senses is against this. *Second.* Tumor of the corpora quadrigemini with pressure on the nuclei of the oculomotor nerve. But in six months marked pyramidal and cerebellar signs should have developed. *Third.* Myasthenia gravis. It is not unusual in this condition for the symptoms to begin with paralysis of the extrinsic muscles of the eyeball.

Against this is the inequality of the pupils. Myasthenia gravis is a disease of the voluntary muscles of the eyes, and therefore there ought not to be inequality of the pupils. Dr. Pritchard suggested hysteria as a possible diagnosis. But in that case the symptoms would be limited to ptosis.

"W."

NEWS ITEMS.

The National Mental Hygiene Exhibit, the same that was shown in Washington last fall, is to be in Rutland beginning Monday evening, May 19th and continuing until Friday evening the same week. Among other speakers secured are Dr. Stewart Paton of Princeton, N. J., director of the exhibit, Dr. George Kirby, director of the Manhattan State Hospital, and Dr. Hoch, director of the New York Psychiatric Institute at Ward's Island, and Dr. W. F. Fernald, director of the Massachusetts State Institution for Feeble-minded.

Dr. H. L. Stickney, U. V. M., 1894, now in Manchester, N. H., was the first doctor in New Hampshire to own an automobile.

Dr. Jacob P. Schneider, U. V. M., 1894, was married recently in Palmer, Mass., where he has practiced since he graduated.

The wife of a Lancashire, England, workman gave birth to a son on February 24th and obtained the maternity benefit of 30 shillings under the law. On April 4th she gave birth to a girl. The question is can she demand another 30 shillings. She can if the new baby is regarded as another child, but if it is regarded as a twin, it will have to be thrown into the first bargain as twins count as one for insurance purposes.

Dr. E. E. Kennedy, a member of the Colorado Legislature has introduced a bill into that legislative body which provides heavy fines and imprisonment for doctor's errors. Surgeons operating for appendicitis must show the appendix after the operation and if the organ is sound the surgeon will be liable to a fine of not less than \$500 nor more than \$10,000 and imprisonment for not less than one year nor more than ten years or both.

Dr. Ira Van Gieson, one of the most accomplished pathologists of this country, died in Bellevue Hospital, New York, March 25th. Many of the methods of staining tissue for microscopic work used all over the world were devised by Dr. Van Gieson. He was forty-seven years old.

The annual meeting of the American Medical Editors' Association will be held June 16th, at the Hotel Radisson, Minneapolis, Minn. An interesting program has been prepared covering items of journalistic as well as general information. The annual banquet will be held on the evening of the 16th, at the Radisson Hotel.

The State Legislature of Colorado has declared tuberculosis to be a communicable disease and requires that reports of cases of tuberculosis be made by the attending physician to the local board of health.

The Medical Society of the Borough of Bronx at its meeting February 12 entered a protest against the recent order of the health department to certain hospitals in the city requiring these institutions to record with the department the names and addresses of all persons suffering from venereal diseases and if possible the names and addresses of all persons supposed to be sources of infection. The reasons assigned are: That venereal diseases are regarded as a reproach and stigma and knowledge of such cases is confidential and privileged; that the continued reporting of such cases in this way will cause blackmail and divorce suits; that statistics will not be improved; that all diagnoses in such cases are not correct; and furthermore the society believes that prevention will not result from this order, for the poor man will either go untreated or treat himself, or will fall into the hands of the advertising quack and will carry on the deadly work of communicating to others his disease.

In the district of Columbia which for administrative purposes is identical with the city of Washington, there were notified between January 1st and March 24th, 1913, 58 cases of smallpox. On March 26 there were 18 cases still under treatment. The disease has been of the usual mild type and to the present no deaths due to it have been registered. Several cases have occurred among employees in the government departments with the result that extensive

vaccination has been carried on among those in these departments. The infection has invaded the White House through an employee, and the President himself submitted to vaccination.

Dr. C. H. Burton announces the opening of the West Side Sanatorium at Detroit, Michigan, for the exclusive treatment of cases of locomotor ataxia.

The annual conference of State and Provincial Boards of Health of North America is to be held at St. Paul, Minn., at the capitol building, Friday, June 13th, 1913.

The 11th annual conference of State and Territorial Health Authorities with the U. S. Public Health Service will be held at the Hotel Radisson, Minneapolis, Minn., June 16th.

The National Association for the Study and Prevention of Tuberculosis will be held in the New Willard Hotel in Washington, D. C., May 8th, 1913.

The annual meeting of the American Medical Association will be held at Minneapolis, Minn., June 17-20.

The American Proctologic Society will hold its fifteenth annual meeting in Minneapolis, Minn., June 16 and 17, 1913. The headquarters and place of meeting will be at Hotel Radisson, Seventh street, near Nicolet avenue. The profession is cordially invited to attend all meetings.

The Medico-Legal Society announce a special jubilee program for the May meeting to commemorate the founding of the journal to be held at the Waldorf-Astoria, May 21, 1913 at 7:45 p. m. to be published in the closing of volume 30 and the opening of No. 1 of Vol. 31, June 1913. The President, T. D. Crothers, will present and have charge of the presentation of the contribution of Honorary Corresponding and Active Members who are invited to contribute to the journal to be presented at the meeting and forwarded to the secretary, on the work and influence of the journal, and also of the Medico-Legal Society since the election of Mr. Clark Bell to the presidency in November, 1872. Brief addresses will be made by prominent members and officers. Contributions will also be furnished by Sir Geo. H. Savage, M. D. of London, Frederick Needham, M. D., Lord Chancellor, visitor in Lunacy of London and Dr. A.

Berrillon of Paris who have accepted honorary membership. Active corresponding honorary members will be invited to contribute as to the value and usefulness of the society and its journal during the four decades that the meeting is given to commemorate as an epoch in its history. You are cordially invited to contribute and cooperate in this jubilee.

NOTABLE FEATURES ON THE PROGRAM OF HYGIENE CONGRESS.

The Fourth International Congress on School Hygiene, and the first to be held in America, at Buffalo, August 25-30, according to an announcement of the executive committee, will be by far the most elaborate effort yet made in this country toward getting the problem of school hygiene before the world. The first International Congress was held at Nuremberg in 1904, the second at London in 1907, the third at Paris in 1910.

The objects of the Buffalo Congress are:

- (1) To bring together men and women interested in the health of school children.
- (2) To organize a program of papers and discussions covering the field of school hygiene.
- (3) To assemble a school exhibit representing the best that is being done in school hygiene.
- (4) To secure a commercial exhibit of practical and educational value to school people.
- (5) To publish the proceedings of this Congress and distribute them to each member.

In addition there is a plan on foot to effect a permanent organization for the purpose of carrying out school hygiene reforms in all the individual communities in this country, if not all over the world.

One of the interesting features of the Congress will be the presence of delegates representing the community interest in school hygiene, including those appointed by mayors and governors, by women's clubs, by school boards, boards of health, by mothers' congresses and charity organization societies and boards of trade. Their help is being solicited with a view of organizing the community in a campaign of school hygiene reform.

The program committee announces a program of two hundred fifty papers and fifteen symposiums, taking up hygiene from the following points of view:

- I. The hygiene of school buildings, grounds, material and up-keep.

II. The hygiene of school administration and schedule.

III. Medical, hygienic and sanitary supervision in schools.

The contributors to the program make up a notable list of speakers: college presidents and professors; state, city and county commissioners of education; teachers and superintendents of public schools, medical college professors; state, county and city health officers; physicians in private practice; engineers and architects.

Special discussions are being arranged on the following subjects:

School Feeding, arranged by the committee on school feeding of the American Home Economics Society.

Oral Hygiene, arranged by National Mouth Hygiene Association.

Sex Hygiene, arranged by the American Federation of Sex Hygiene.

Conservation of Vision in School Children, arranged by the Society for the Prevention of Blindness.

Health Supervision of University Students, arranged by Dr. Mazyck P. Ravenel, University of Wisconsin.

School Illumination, arranged by the Society of Illuminating Engineers.

Relation Between Physical Education and School Hygiene, arranged by the American Physical Education Association.

Tuberculosis Among School Children, arranged by the Society for the Prevention of Tuberculosis.

Physical Education and College Hygiene, arranged by the Society of Directors of Physical Education in Colleges.

The Binet-Simon Test, arranged by Professor Terman, Stanford University.

The Mentally Defective Child, arranged by Dr. Henry H. Goddard, Vineland, N. J.

Various citizens' committees of Buffalo are arranging an elaborate entertainment for the benefit of the visiting delegates. There will be receptions and a grand ball, a pageant of school children, and excursion trips to the great industrial plants of Buffalo, and to the scenic wonders of Niagara Falls. The Boy Scouts will act as official guides.

Delegates will attend from every college and university of note in this country, from other leading educational and hygienic institutions and organizations, and from every country in which

an active interest is being shown in the welfare of school children, which includes all the leading nations of the world.

The Congress is open to all persons interested in school hygiene upon the payment of a fee of five dollars. Application for membership should be sent to Dr. Thomas A. Storey, College of the City of New York, New York City.

President Wilson has accepted the honorary office of patron of the Congress. The president of the Congress is Mr. Charles W. Eliot of Harvard University. The vice-presidents are Dr. William H. Welch, of Johns Hopkins University, and Dr. Henry P. Walcott, president of the recent International Congress on School Hygiene and Demography, and chairman of the Massachusetts State Board of Health.

Governor Foss of Massachusetts has vetoed a bill prohibiting the use of common drinking cups in all industrial establishments where more than twenty-five people are employed. Governor Foss took the stand that the State Board of Health has authority to forbid the use of common cups in public places, and he thought that the public health was sufficiently safeguarded. He believed that to deprive persons of water because of the absence of bubble fountains would be a more serious consideration than the danger of infection.

The trustees of Dartmouth College announced recently that the last two years of instruction in the Dartmouth medical school will be suspended after the graduation of the present junior class in 1914. The first two years in medicine of the present four years course will be reorganized into a department of the college and work in this department will be credited toward the requirements of a bachelor of science degree. It is planned to conduct the new department of the college so that Dartmouth students will be qualified to enter the third year of any graduate medical school. Dartmouth, however, will not grant any more degrees of doctor of medicine. The reason given by the trustees for their action is that because of its isolated location the medical school has found much difficulty in meeting satisfactorily the steadily advancing requirements set by the profession. The medical department of the college will devote itself hereafter to theoretical studies and laboratory work. The Dartmouth medical school, the fourth in order of founding in the United States, was es-

tablished by the trustees of the college in 1798. Dartmouth will offer a course next year in scientific management as part of the second year work in the Amos Tuck School of Administration and Finance. Prof. Henry W. Shelton, Yale, '04, will conduct the course in the application of scientific management to manufacturing and merchandising.

Dr. J. W. Cooledge, formerly of Bristol, N. H., and recently of Concord, has removed to Colebrook, N. H.

Dr. J. T. Greeley has closed his practice in Nashua, N. H., and is now in New York City. Dr. Greeley is the inventor of the Greeley Unit form of hypodermic medication. He is marketing these units and biological products.

Dr. Charles H. Knight, professor of laryngology in the Cornell Medical School, died April 28.

A rival of Miss Helen Keller has been found in Chicago in the person of Dr. Jacob W. Bolotin, whose appointment as attending physician at the tuberculosis hospital at the Dunning Asylum has just been announced by President McCormick of the county board. Dr. Bolotin, who is only 25 years old, has examined 3,500 patients at the Municipal Tuberculosis Hospital in the last fourteen months and less than fifty of them knew he was blind. His diagnosis is made wholly by touch. He can give the exact temperature by feeling the skin and an exact pulse count without the aid of a watch. He uses the touch system of typewriting, but cannot write his own name with a pen or pencil.

Mary Mullen, known to medical circles as "Typhoid Mary," has been advised that she has no cause of action against the Board of Health of New York, or against Commissioner Lederle, Dr. Bensen, or Dr. Soper, who caused her to be detained for three years on North Brother Island as a public menace. The Board of Health in this case, it is held, acted entirely within the power conferred upon it by the city charter.

By the direct purchase of the Wisconsin College of Physicians and Surgeons, and leasing the property of the Milwaukee Medical College, it is reported that Marquette University has brought about the merger of the two medical schools of Milwaukee. The new school resulting will, it is said, be developed as an or-

ganic department of the Marquette University, under the name of Marquette University School of Medicine.

OBITUARY.

Dr. Orlando W. Sherwin died at his residence in Woodstock, April 18th, in the 76th year of his age.

Orlando Wood Sherwin was born in Woodstock, Oct. 30, 1837. He was educated in the common schools of this town and at the Green Mountain Institute, South Woodstock. He began the study of medicine in 1862 with Dr. William McCollom in Woodstock, later attending medical lectures at Berkshire Medical College at Pittsfield, Mass., and Dartmouth Medical College, graduating from Dartmouth Nov. 1st, 1865.

Dr. Sherwin began the practice of medicine in the neighboring town of Reading in May of the following year and, remaining there something over three years, moved to Woodstock August 1st, 1869.

For forty-five years since then Dr. Sherwin has followed his profession in this community, and attained an unusual degree of success and personal popularity.

Dr. Sherwin was a man of vigorous mentality, and always a student. As a physician of wide and accurate information pertaining to all branches of his life-work, he had few peers among country practitioners, and being an omniverous reader, he was also unusually well posted upon all current topics. Dr. Sherwin was especially successful as a diagnostician, and was for years one of the foremost surgeons of Vermont. He was accorded the distinction of having been the first man in the State to demonstrate the tubercle bacillus, this result being quite in line with his characteristic practice of up-to-date investigation and possession of the most approved appliances of his profession.

Dr. Sherwin was a member of the Vermont Medical Society and its president in 1880; member of the American Medical Association; also of the White River Medical Society and of the Connecticut River Medical Society. For years he was a member of the State Board of Health and during that time the Vermont Laboratory of Hygiene was established by the board. He was Surgeon-General of Vermont in 1885 and

in 1886, and for 20 years was a member of the Board of Federal Pension Examining Surgeons. He held a commission signed by President Roosevelt as First Lieutenant, Medical Reserve Corps, U. S. A. (honorary member) and his name stands first on the list of appointments.

Dr. Sherwin was the author of numerous medical papers published in the transactions of the medical societies and journals and his counsel was often sought by physicians in this and other localities.

John Howe Winch, M. D., University of Vermont, College of Medicine, 1880, Northfield, Vt., at one time a representative in the State legislature, died at Heaton Hospital, Montpelier, March 28th, aged 57 years.

Dr. Elmore S. Allbee, late of Bellows Falls, Vt., died May 14, 1913, was born May 7, 1848 at Londonderry, Vt., son of Ebenezer and Angeline (Whitcomb) Allbee.

He received his early education in the schools of Londonderry and surrounding towns, graduating from Chester Academy. He began the study of medicine with Dr. Spring of Jamaica, graduating from the Albany Medical college in 1870. He came to Bellows Falls in July 1875, where he has been in active practice since, doing a large family and consultation business in Rockingham and surrounding towns in Vermont and New Hampshire until five days previous to his decease from pneumonia. He had been health officer for Rockingham since 1903, and made a most successful one. Dr. Henry D. Holton, for years secretary of the State Board of Health says of him, "Dr. Allbee was a most efficient health officer in the years which he served in that capacity, and performed his duty without fear or favor. He was a capable official and never dropped behind the times in his profession. I mean by that that he was an ardent student and was versed in modern methods and practice, and was ever anxious to have full knowledge of what was going on in every branch of his profession."

He married May 5, 1881, Miss Clara A. Allbee of Springfield, Vt. Besides his wife, he leaves a daughter, Miss Angie G. Allbee, a teacher in the public schools of Passaic, New Jersey, and a brother, Judge Zina H. Allbee of Bellows Falls.

Dr. Allbee was a prominent and active member of Medical Societies, including The Windham

County Medical Society, The Connecticut River Valley Medical Association, The Vermont State Medical Society and American Medical Association.

The esteem and affectionate regard in which he was held by his colleagues and the community in which most of his life work was done, is well shown by the following resolutions:

RESOLUTIONS ON THE DEATH OF

DR. ELMORE S. ALLBEE.

Whereas, In His Divine Providence it has seemed fit to The Great Physician to remove from this earthly sphere our true friend and co-worker

DR. ELMORE S. ALLBEE.

Whereas, by this act of the Divine Will the Rockingham Medical Club has met with an irreparable loss in the passing from this life of our colleague and first president whose influence was most potent in the formation and success of our association, and the town and state have lost a most faithful servant whose ability, rugged honesty and dislike of shams has caused him to be held in most affectionate regard not only by us and other members of the medical profession but also by the community he served so faithfully as physician, surgeon and health officer for many years in his efforts to relieve and prevent human suffering. Be it

Resolved, That we tender to the bereaved family our most heartfelt sympathy in their great sorrow. Be it

Resolved, That we, by striving to emulate his virtues, most honor the memory of our deceased colleague. Be it also

Resolved, That these resolutions be spread upon our records, that a copy be presented to the bereaved family and that they be published in the Vermont Medical Monthly and the Bellows Falls Times.

DR. EDWARD R. CAMPBELL,

DR. GEORGE H. GORHAM,

DR. IRA H. PROUTY,

Committee.

BOOK REVIEWS.

PSYCHANALYSIS: Its Theories and Practical Application. By A. A. Brill, Ph. B., M. D. Chief of the Neurological Department of the Bronx Hospital and Dispensary; Clinical Assistant in Psychiatry and Neurology at Columbia University Medical School. Octavo of 337 pages. Philadelphia and

London. W. B. Saunders Company, 1912. Cloth \$3.00 net.

Any book which adds to our knowledge of psychoanalysis is to be welcomed. The author's wide experience eminently fits him to write on this subject. The purpose of the work is to present the practical application of Freud's theories hoping thereby to stimulate further interest. To workers in psychotherapy we believe this book will be of great value and it should be of interest to all physicians.

SKIN GRAFTING. For surgeons and general practitioners. By Leonard Freeman, B. S., M. A., M. D. Professor of Surgery in the Medical Department of the University of Colorado, Surgeon to St. Joseph's Hospital, the National Jewish Hospital, and the City Hospital, Denver, Colorado. With twenty-four illustrations. Price \$1.50. C. V. Mosby Company, St. Louis, 1912.

The book is the resumé of the history of skin grafting with a description of the different methods in use, the vitality of skin grafts, and the application of skin grafting to various conditions. The use of local anesthesia is discussed. It is a practical work on the subject.

KEEN'S SURGERY VOLUME VI: The Volume with the newest Surgery. By 81 eminent surgeons. Edited by W. W. Keen, M. D., LL. D., Hon. F. R. C. S. (Eng. and Edin.), Emeritus Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Phila. Octavo of 1177 pages, with 519 illustrations, 22 in colors. Philadelphia and London: W. B. Saunders Company, 1913. Entire work consisting of six volumes, per volume: Cloth, \$7.00 net; Half Morocco, \$8.00 net.

This volume has been written to include the advances which have been made in surgery since the work was begun. The development of surgery has been so rapid that new procedures in almost every phase of surgical work have been established. This volume is intended to discuss this advance in every department of surgery and make this system thoroughly up to date. It would be impractical and certainly not necessary to enumerate these in detail, they include the discussion of thoracic surgery, anesthesia, cancer, syphilis, etc. The book cannot fail to meet with a hearty reception from medical men generally and surgeons particularly.

PRINCIPLES AND PRACTICE OF OBSTETRICS. By Joseph B. De Lee, A. M., M. D. Professor of Obstetrics at the Northwestern University Medical School. Large Octavo of 1060 pages, with 913 illustrations, 150 of them in colors. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$8.00 net; Half Morocco, \$9.50.

This book is the product of many years of practical experience in obstetrics and in teaching the subject. The author has had in mind a practical book—one that is free from the dead wood of tradition—and gives a discussion of facts as they exist today. It is well written, profusely illustrated and altogether a most satisfactory work for either physician or student.

INTERNATIONAL CLINICS.—A quarterly of illustrated clinical lectures and especially prepared original articles on treatment, medicine, surgery, gynecology, pediatrics, obstetrics, orthopedics, pathology, dermatology, ophthalmology, otology, laryngology, hygiene and other topics of interest to students and practitioners. Vol. IV. Twenty-second series, 1912, price \$2. J. B. Lippincott Co., Philadelphia, and London.

This number of the International Clinics contains many articles of general interest to physicians. The discussion of the Wassermann test for syphilis, treatment of exophthalmic goitre, clinical phenomena associated with arteriosclerosis, and the discussion of weak feet are especially interesting. There are also interesting articles on medical economics.

HAND BOOK OF DISEASES OF THE RECTUM. By Louis J. Hirschman, M. D., Fellow American Proctologic Society; Lecturer on Rectal Surgery and Clinical Professor of Proctology, Detroit College of Medicine; Attending Proctologist, Harper Hospital, Providence Hospital, and U. J. C. Clinic, etc., Detroit, U. S. A. With one hundred and seventy-two illustrations, mostly original, including four colored plates. Second Edition revised and rewritten. C. V. Mosby Company, St. Louis. Price, \$4.00.

The second edition of this handbook represents practically a new book. The general text has been changed in rewriting to include an advance in this line of work. Not only has the book been rewritten but much new material in text and illustration has been added. It is a

book especially adapted to the needs of the general practitioner and should be of service in directing the diagnosis and care of surgical cases by the general practitioner.

INTERNATIONAL CLINICS, Vol. I, Twenty-Third series, 1913.

Among the interesting articles in this volume are Clinical Symptoms and Diagnosis of Gall Stones, Intestinal Auto-Intoxication, and the Surgical Treatment of Umbilical Hernia. The section on Pediatrics has an article on Retarded Mental Development in Children. The report of cases operated on for Pott's disease of the spine by Albee's method of bone grafting is especially interesting and instructive.

MEDICAL MEN AND THE LAW. A modern treatise on the legal rights, duties and liabilities of Physicians and Surgeons, by Hugh Emmett Culbertson. Lea & Febiger, Publishers.

The average physician has an inborn dread of the courts of law and yet it is almost certain that most every physician in active practice will at some time be called into intimate relations with the law either as a litigant or a witness. At such times, the doctor wants all the information he can get on many of the complexities of his relation to the law and he wants them badly and in a hurry. It is then that he will be glad to have a book of this sort. If every physician would purchase the book now and read it, he might save himself some embarrassing acquaintances with the law.

THE SURGICAL CLINICS OF JOHN B. MURPHY, M. D., at Mercy Hospital, Chicago. Volume I. Number VI. (December). Octavo of 153 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1912. Published Bi-Monthly. Price per year: Paper, \$8.00. Cloth, \$12.00.

This is the report of interesting clinics, comprising cancer of the breast, effects of radioactive substances in the treatment of malignant disease, pelvic infections, arthritis, arthroplasty

for ankylosis of elbow, the treatment of various forms of fracture, a case of ankylosis of the lower jaw, and many others. It is a very interesting number and contains much very valuable information in the field of surgery.

W. B. SAUNDERS COMPANY, Publishers of Philadelphia and London, have issued another edition (17th) of their handsome illustrated catalogue.

In going through this edition we find it describes nine new books and ten new editions, not described in the previous issue. These new books are of great interest to the medical man, because they treat of subjects being daily discussed in medical circles. Any physician can get a copy of the Saunders' catalogue by dropping a line to these publishers. A copy should have a place on the desk of every physician, because it is most valuable as a reference work of modern medical literature. Send to Saunders to-day for a copy.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

THE TRAINING OF HEALTH OFFICERS.

F. F. WESBROOK, Minneapolis (*Journal A. M. A.*, April 19), says that we have been slow in this country to recognize the need of special training in public service and especially the neglect of this consideration in the appointment of health officers. We seek through volunteer agencies to secure satisfactory administration of laws which should become operative through official mechanism and better qualified officials. We often leave to the incoming graduate the unpopular work of the health officer. There is too much of selfish interest and too little altruism in considerations for the public welfare. We need experts, and they should have the sympathetic support of the medical profession. A general training in medicine does not qualify graduates as experts in public health matters. Engineering colleges are providing courses in sanitary and municipal engineering, but further training is needed for their graduates from a medical point of view. The same is true as regards the training of social workers and others who have important public duties to perform. Wesbrook gives an outline of cooperative work laid out at the University of Minnesota which was presented to the Minnesota State Sanitary Conference, and also a list of subjects that should be included in the curriculum for the student of public health. An additional safeguard for public health, he says, if it seems desirable, may be the requirement of a license

of the trained worker in this department in addition to his diploma or certificate. The Danish plan of a provisional appointment to public office for a limited period in order to determine practical fitness has very decided advantages.

ARTHRITIS DEFORMANS.

Assuming that the cause of arthritis deformans is a bacterial infection, says T. W. HASTINGS, New York (*Journal A. M. A.*, April 19), then cases of chronic infectious arthritis and arthritis deformans must be classed together etiologically. He refers to the authors who have made this assumption and says that the proof of infection can be searched for by the following tests: "1. Cultures of exudates from the joints and tissues about the joints. 2. Cultures from possible foci other than the joints (as evidenced by clinical manifestations). 3. Blood-cultures for a bacteriemia. 4. Blood-tests for immune bodies of which the complement-fixation test against autogenous antigens (obtained by the three preceding methods) and against exogenous antigens, is the most appropriate." The first method, he says, is the only one that will prove absolutely that the joints and neighboring tissues have been invaded by bacteria. The second and third show an infection of the body generally and whether method three and four are mutually excluded has not been determined but this would seem probable. The papers of Swift and Thro and of Swartz and McNeal have suggested to the author the use of complement-fixation tests against various strains of streptococcus, staphylococcus and gonococcus to determine the existence of bacterial infection in cases of chronic deforming arthritis and he gives instances of cases of long standing in which simple gonococcus vaccine had failed but which yielded to an autogenous vaccine of a streptococcus from the prostate gland. Since the fall of 1910 twenty-four cases of arthritis deformans have been investigated by methods 2, 3 and 4; in none was a positive blood-culture obtained. In seven cases foci of infection were found and in twelve positive complement-fixation reactions were obtained. In the other twelve this test was negative and, in two of these, positive cultures were obtained from foci that could not be positively connected with the disease. Eleven non-arthritic cases were used as controls with varying results which are reported. The blood in all these cases was tested for the Wassermann reaction and complement-fixation against various germs obtained from various conditions; from sputum, tonsils, teeth and genital organs. Details of the preparation of the antigens and technic are described. Results in the typical cases of arthritis deformans are given as follows: "Of the typical cases of arthritis deformans, of from two to fifteen years' duration, six reacted to strains of *Streptococcus viridans*. From four of these cases the same organism was isolated from a tooth-socket after the extraction of teeth—in three of the four, complement-fixation tests were found positive before the infection of the alveolar processes was looked for. One of these cases reacted to gonococcus also. Four cases of typical arthritis deformans reacted to the gonococcus; one of them to streptococcus also. Three cases, which were classed from the history as infective deforming arthritis, reacted to the gonococcus. The deformities were typical of arthritis deformans. In twelve

cases of typical arthritis deformans the tests were negative for the Wassermann reaction, and for the gonococcus, the streptococcus and staphylococcus. Improvement under treatment with injections of vaccine, considered specific on account of the complement-fixation tests, has strengthened the supposition that some cases of arthritis deformans are infective in nature and that the infecting germ may be a *Streptococcus viridans* or a gonococcus."

SAHLI'S SPHYGMOBOLOMETER.

N. B. POTTER, New York (*Journal A. M. A.*, April 19), describes and illustrates Sahli's pocket sphygmobolometer and the technic of its use. These are best understood with reference to the illustration; the measurement is in no way related to the estimation of blood-pressure. The instrument enables us to estimate the energy or work of the pulse-wave, and indirectly the strength of the cardiac systole and not the static conceptions of blood and pulse-pressures. Sahli considers that this measurement of energy is in effect what we have sought to determine by palpating the pulse with the finger and that a reasonable estimation by instrumental aid will give us new information regarding the circulation which will be of great value in many pathologic conditions. He says that to estimate the condition of the circulation by sphygmomanometric measurements is as futile as it would be to calculate the horse-power of an engine by the steam pressure in the boiler. In the interpretation of the sphygmomanometric measurements it must be kept in mind that they measure not the functional capacity of the heart for work but the amount accomplished at a given instant. Clinical experience will soon show whether or not this method is of practical value.

RENAL CALCULUS.

A. P. OHLMACHER, Detroit (*Journal A. M. A.*, April 19), discusses the connection between bacteriuria and nephrolithiasis and the treatment of the latter by autogenous vaccination. The only previous literature he finds is an early publication by Wright on vaccine therapy, which he quotes. Ohlmacher publishes eight cases, five of them cases in which there were one or more attacks of renal colic but in which the patient applied for treatment of painful urination. All but two of these patients were symptomatically relieved by autogenous vaccine treatment. The organisms were found to be the staphylococcus and colon bacillus. While the cases were not numerous enough to authorize conclusive deductions, he has been favorably impressed with the results of the treatment in these cases. In several the offending bacterium was still found in the urine after relief of symptoms, hence he thinks a conservative attitude should be maintained as regards the possibility of preventing calculus formation by bacterial vaccine treatment. In all cases the bacteriologic analysis was immediately begun on the freshly evacuated urine, sterilized receptacles being employed. Agar plate-cultures were prepared. "Vaccines were prepared either from the first generation of pure cultures when laid on agar-slants, or from the second generation from plates, transplants

being taken from several colonies to secure the possible 'varieties.' The bacterial emulsion was killed by beating for half an hour at 60 C. (140 F.), diluted with sterile water, and preserved by adding 0.4 per cent. trikresol. The first dose of vaccine numerically approximated by the differential density method, and subsequently standardized by the response to inoculation both as regards the local reaction and the symptomatic effect. When treatment was prolonged, fresh autogenous vaccines were prepared as occasion required." Ohlmacher thinks these experiences emphasize the importance of routine bacteriologic analysis in all cases of renal calculus and the associated pyuria. Bacterial therapy with autogenous vaccines should be instituted in non-operative cases of non calculous cases of pyuria and bacteriuria for the relief of bladder irritability and impaired general health and in cases in which there has been operation and these symptoms persist.

AMEBIC DYSENTERY.

R. LYONS, New Orleans (*Journal A. M. A.*, April 19), impressed by the rapid results of Rogers' emetine injection treatment for amebic dysentery in India, has utilized it himself in six cases which he here reports. All but one recovered and this patient should not be counted as he was hopeless from the first. The average length of treatment with emetine until stools became normal was nine days in the other five cases, and he thinks it would have been still shorter had the ampules of emetine been employed throughout. The largest dose used was three-quarters of a grain and no ill effects were noted from this dosage. The average total dosage was 2.6 grains which is a little larger than that of Rogers. The preparation was made up by a local druggist, and the alkaloid emetine caused at times a little irritation and infiltration on account of the slight excess of acid. The advantages of the subcutaneous injection of emetine treatment are summarized by Lyons as: 1. Simplicity and ease of administration of the drug. 2. Absence of pain, vomiting and depression. 3. Accurate dosage (no loss through the bowels). 4. Rapid absorption and effect. 5. Reliability of the product (hydrochlorid). While the time which has elapsed is yet too short to enable one to speak with absolute certainty as to the cure, he believes that the results are highly suggestive and that we have in this an ideal method of treating amebic disease.

ENTAMEBAS.

S. T. DARLING, Ancon, C. Z. (*Journal A. M. A.*, April 19), reports the observation in the senile strain of *E. tetragena* of the budding and other characteristics of the *E. histolytica* described by Schaudinn and Craig. He experimentally infected kittens by rectal injection with trophozoites from a case of dysentery in man and on the death of the first set, kittens of a second set were inoculated and so on until the strain matured. The material showing the budding forms was in the fourth remove, at the time of the death of the kittens, that is, when the strain had become mature or senile, reduced in

size till it resembled *E. minuta*, when chromidia had appeared in every trophozoite and a few cysts had appeared. The appearances are described, and he says the findings can be easily confirmed by following the same procedure. His concluding statement is, "It is believed that these findings in the cat establish a correlation between the findings of Schaudinn and Craig on the one hand and those of Viereck, Werner, Hartmann and others on the other, and it emerges that *E. tetragena* is the common pathogenic entameba of man as Hartmann has already stated and that *E. histolytica* is in all likelihood a spurious species, having been described from degeneration forms in senile races of *E. tetragena*."

ESOPHAGEAL STRICTURE.

W. LERCHE, St. Paul, Minn. (*Journal A. M. A.*, April 19), reports three cases of benign cryptogenic stricture of the esophagus that have occurred in his practice within a year. All were in the cervical part of the esophagus and the patients were women. One was 32 and the others each 67 years of age. In one there was also a pocket which was opened. He says, that when an elderly or middle-aged patient complains of difficulty in swallowing it is usually apt to be diagnosed offhand as due to nervousness or cancer, according to the length of time it has existed. Ocular inspection through the esophagoscope is the only means of obtaining a positive diagnosis, and in these cases the nature of the condition could not have been ascertained any other way. All the patients recovered perfect capacity for swallowing.

PARASITE OF SYPHILIS.

A. K. DETWILER, Omaha (*Journal A. M. A.*, April 19), notices the recent publication by Ross (*Brit. Med. Jour.*, Dec. 14, 1912, p. 1651) of his "jelly method" and its findings and says that he has repeated the technic and found the parasites and followed most of the phases as described by Ross. When lymph or scrapings from chancres can not be obtained the examination of the peripheral blood will suffice, though it takes more time and the organisms are not so numerous. The picture is quite different from the ordinary blood-picture otherwise obtained from syphilitics. The parasites appear as small, round, oval or pear-shaped copper-colored bodies containing five granules, more or less deeply stained and having at times a so-called vacuole or nucleus. The jelly is made as follows: "agar 1 gm., sodium chlorid 0.5 gm., distilled water 100 c.c. Boil, filter and add 4 c.c. Unna's polychrome methylene-blue (Gruebler) and keep in test-tubes. When required for use, melt, pour a small quantity on a microscope slide, spread into a thin film and allow to cool and set. Take a drop of the material to be examined on a cover-glass and mix with the same quantity of a 3 per cent. solution of sodium citrate and invert on the hardened jelly. After several minutes the leukocytes and organisms take up the stain rather suddenly and the slide is ready for study with the oil immersion lens. The activity may last for an hour or more but finally the color fades and they die away." The article is illustrated.

RHEUMATIC **INFECTIONS**

SUCH AS

**ARTHRITIS,
NEURITIS,
IRITIS,
LUMBAGO,
SCIATICA,
NEURALGIA,
TONSILLITIS,
CHOREA,**

ARE SUCCESSFULLY TREATED WITH

RHEUMATISM **PHYLACOGEN.**

WRITE FOR DESCRIPTIVE LITERATURE.

PARKE, DAVIS & CO.
DETROIT, MICH.

THERAPEUTIC NOTES.

THE PHYLACOGEN TREATMENT FOR RHEUMATIC INFECTIONS.—Since the announcement, some time ago, of the large percentage of recoveries following the use of Rheumatism Phylacogen in over thirteen hundred cases of rheumatism—results reported by clinicians in various sections of the United States—interest in this new bacterial derivative has developed to a very marked degree. Physicians everywhere are demanding information in regard to this therapeutic agent: an agent which appears to produce recoveries in at least 85 per cent. of cases—and that, too, in a disease that for hundreds of years has been a stumbling block to the medical profession.

What is the scope of the new product? In what forms of rheumatism is its use indicated? These questions are being asked. We are glad to be able to answer them—in a general way, at least. From the literature on the subject it is learned that Rheumatism Phylacogen is applicable to acute rheumatic fever, acute articular rheumatism, acute inflammatory rheumatism, chronic rheumatism, rheumatic arthritis, rheumatic myalgia, rheumatic neuralgia, rheumatic iritis, lumbago, sciatica—in short, to all pathological conditions due to infection by the *Streptococcus Rheumaticus*. From the same source are gathered these suggestive hints upon the subject of diagnosis: "True rheumatism must be differentiated from septic arthritis, tubercular arthritis, gonorrheal arthritis, gout, arthritis deformans, traumatism, etc. The failure of Rheumatism Phylacogen, properly administered, affords presumptive evidence of an error in diagnosis." In the case of chronic rheumatic conditions stress is laid upon the fact that continuous treatment for three or four weeks may be necessary. If, however, the patient does not show continuous improvement, it is urged that the treatment be discontinued and a careful re-examination made so that the exact pathological condition may be determined.

Other phases of the Phylacogen therapy—as questions of dosage, reactions, methods of administration, etc.—might very properly be considered at this juncture. These, however, are subjects that cannot be adequately discussed within the limits of this article. They are fully treated in the Phylacogen literature, issued by Parke, Davis & Co., and procurable by any physician upon request to the home offices at Detroit, Michigan.

COD LIVER OIL IN BRONCHIAL INFLAMMATION.—The great value of cod liver oil in chronic bronchial inflammations is so thoroughly accepted by the profession, that the only question which ever arises in regard to its use, is the form in which it may be best exhibited. In regard to a suitable form for administration, the great difficulty has been to secure palatability without the loss of therapeutic power. Cord. Ext. Ol. Morrhuæ Comp. (Hagee) combines these two requisites as a result of which advantage it has secured the support of a large proportion of the profession.

In the bronchial ailments of young patients especially, it will be found a most satisfactory agent.

THE CASE OF WOOD ALCOHOL.

How real and immediate are the dangers which beset us in connection with the unsus-

pected use of wood alcohol is made apparent by a notice of judgment lately published by the office of the U. S. Secretary of Agriculture. Several individuals, acting under the name of the Lucca Produce Wine Co., had marketed a product with the distinctly pretentious label: "Gran Liquore Della Stella Elixir Tonico Stomatico." Analysis of a sample of this promising elixir by the Bureau of Chemistry indicated it to contain: methyl alcohol, 20.46 per cent. by volume; ethyl alcohol, 8.08 per cent. by volume; and the coal-tar dye Acid Yellow G to furnish an attractive color. The case was reported for prosecution as a violation of the Food and Drugs Act, but fortunately an indictment was found under a section of the New York Criminal Code. One defendant, Alberto Milanese, after having spent two months in jail awaiting trial, was on pleading guilty sentenced to serve a term of seven months in the New York County penitentiary. Another defendant, Carlo Giradi, had sentence suspended on a plea of guilty. *The Journal of the American Medical Association*, commenting on the case, expresses the hope that a more vigorous management of such flagrant violations of the law will have a wholesome effect, for there are few deterrents like jail sentence.

THE STOMACH IN HUNGER.

The hundredth anniversary of the entry of one of America's pioneer medical investigators, Dr. William Beaumont, into the practice of medicine was fittingly commemorated last year. The devoted efforts of this undaunted man of science—a backwoods physiologist, as Osler has suggestively designated him—have furnished the inspiration to a number of successors to repeat the observations which Beaumont made on his famous subject Alexis St. Martin, the man with the "lid on his stomach."

Recently Professor Carlson of the University of Chicago has made a number of observations on a young man in normal health who for the last sixteen years has fed himself through a permanent opening in the stomach wall owing to complete closure of the esophagus as the result of accidentally drinking a strong solution of caustic soda. He has furnished some interesting and conclusive contributions to the physiology of hunger.


There have been diverse theories of hunger from earlier days to the present era. Until quite

recently it has been widely believed that hunger is a general bodily sensation with a local reference to the stomach.

Some authorities have vigorously combated this view, and maintain that hunger is not a general sensation. Experiments have led to the conclusion that hunger results from powerful contractions of the stomach. With this general view the observations which Carlson has now been able to make on his new subject are in accord. He finds that the empty stomach exhibits, at least during the first twenty-four hours after a meal, two types of rhythmic movements; one is feeble but continuous; the other consists of strong contractions. In the earlier periods of hunger at any rate, the empty stomach is never completely at rest. Hunger, or the lack of it, is a condition which at times commands the considerate attention of the physician. The absence of hunger in fevers can now be accounted for by the total cessation of all movements of the stomach in serious infections. This also explains the inordinate appetites of certain classes of nervous patients. Physiologic observations on an occasional unfortunate individual, says *The Journal of the American Medical Association*, serve a useful purpose by directing attention to numerous little-understood and hitherto unexplained manifestations of disease.

THE SWEAT-GLANDS OF DIFFERENT RACES.

Inasmuch as the regulation of body temperature is greatly facilitated by the evaporation of perspiration from the skin, the development of an efficient system of sweat-glands is a distinct advantage to those races which have to live in the warmer climates. It is often asserted that negro races are particularly adapted to residence in the tropics; and the question of the relative development of their sweat-glands is at once raised. Mr. Elbert Clark of the department of anatomy in the University of the Philippines at Manila has accordingly investigated the relative number of these in different peoples. After measurements on American soldiers, Philippine scouts and persons of both colors in civil life, he has come to the conclusion that the Malay possesses from 12 to 15 per cent. more sweat-glands than the white. Negroes have an excess



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of perhaps 7 per cent. Counts thus far made on Negritos give an excess of 27 per cent. for adults and 67 per cent. for youths. If these facts are substantiated and the relative capacities of the individual glands in the races are proportional to their number, says *The Journal of the American Medical Association*, the dark-skinned dwellers of the tropics disclose an advantage over the white man which the latter can offset only by seeking greater shade.

SCHRANK ADJUDGED INSANE ON REAL EXPERT TESTIMONY.

Wisconsin can, with good reason, feel proud of the record she has established in trying and disposing of John Schrank, who on October 14 attempted to assassinate Colonel Roosevelt, and on November 25, exactly six weeks later, was committed to the insane asylum. Those who have complained of the law's delays, the endless technicalities, the jarring "expert witnesses," the motions for new trials and the appeals on flimsy pretexts that have characterized most criminal prosecutions of late years, will read with relief and new hope the record of the simple, sane and thoroughly dignified procedure followed by the trial judge. The court appointed a commission of five well-known alienists to examine the accused and report to the court as to his sanity. As noted last week in our news columns, the commission, after careful investigation, reported unanimously that Schrank was suffering from insane delusions, that he was insane at the present time and that he was unable to conduct his defense intelligently. As a part of the report, they submitted a statement prepared by Schrank to be read to the jury, which statement alone contained sufficient internal evidence of Schrank's mental irresponsibility. According to the newspapers, Schrank showed keen disappointment in not being allowed to pose as a martyr, to the satisfaction of his paranoiac delusions and the inspiration of other insane cranks. The entire procedure, says *The Journal of the American Medical Association*, is in gratifying contrast to some of our "celebrated" murder trials and is an unanswerable reply to the argument that such spectacles are necessary to protect individual rights or are unavoidable under our laws. Judge

A. C. Backus, the trial judge, deserves the approbation of all good citizens, and especially of all practitioners of medicine and law, since it is on these two professions that the scandal and disgrace of the abuses of expert testimony have fallen most heavily.

PHYSICIANS AND THE NERVOUS LIFE.

The last three United States census reports gave the death-rate for physicians as higher than that of any other professional class. Nervous diseases constitute the most important factor in this death-rate. Commenting on these figures, W. K. Newcomb enumerates the probable causes for this unsatisfactory showing—the urgent call interrupting the moment of relaxation, the telephone bell breaking in on the hour devoted to quiet reading, the ever-present sense of responsibility and, most of all, what William James defines as "those absurd feelings of hurry and having no time . . . that breathlessness and tension, that solicitude of results, that lack of inner harmony and ease by which, with us, work is apt to be accompanied." Americans are inclined to measure efficiency subjectively—to make "the strenuous life" a synonym for "the efficient life." If a man reaches home at night a nervous wreck, he is apt to feel sure that he has spent his day effectively and well. Possibly even physicians, who from observation and theory know only too well the absurdity of this subconscious reasoning, are liable to be infected by it. The inexorable urgency of many of the physician's duties will never permit his life to flow with serene and rhythmic placidity; but doubtless it would be well worth while for most of us to spend a little time in analyzing and attempting to eliminate some of the causes for that wearing and useless haste and worry which shorten our days.—*J. A. M. A.*, lix, 727.

HOOKWORM DISEASE IN ANCIENT EGYPT.

Walter H. Page, *World's Work*, September, 1912, states that hookworm disease was described in Egypt in 1833, but that a very good clinical description of the disease has been found in a papyrus almost 3,500 years old.

HEALTH IN THE HOUSE OF GOVERNORS.

While one occasionally hears much of state's rights, it is a hopeful indication of the recognition of the people's rights to note the Conference of Governors, whose 6th annual meeting was recently held in Richmond. This annual conference of the chief executives of the various states is a most satisfying evidence of the tendency of the day to unite upon broad principles in a consideration of general welfare. The problems dealt with were various, although penology gave rise to the most important discussion of the meeting.

Governor Oddie struck a very progressive note in discussing the divorce problem by advocating a uniform divorce law which should consider several causes for divorce, instead of the single cause as now found on the statutes of many states. His views were quite in accord with the recent report of the British Commission on Marriage and Divorce. It has been wisely said that if marriages were made more difficult and divorce easier, great good would be accomplished. The modern view appears to indicate the necessity of regarding the legal basis of the marriage contract from the standpoint of eugenics rather than on the basis of its religious significance.

A similar idea was suggested by Governor Hawley of Idaho, who advocated that a health certificate should be a pre-requisite to securing the marriage license. Beyond these two subjects there was little of medical significance at the conference, save in the incidental discussion relating to Child Labor, Workmen's Compensation and the Minimum Wage.

It would be exceedingly interesting if at some future meeting of the Governors' conference, which has now effected a permanent organization, the health officers of the various states should express their views as to the means whereby general health within the several states might be enhanced through uniform health laws.

Undoubtedly greater attention would be given to the necessity of establishing a national department of health, if the chief executives of the various states could be made to realize how far individualized state health laws interfere with the essential health protection of the citizens of their respective states.—*Medical Review of Reviews.*



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THE LANGUAGE OF THE CHILD.

W. D. Boggs observes that children with reference to disease are like a volcano, which may, at any time, break forth with resulting damage, which may be serious.

The safest rule in caring for sick children is never to give them up as long as they breathe. Infants require particular care and demand a special method of examination. These requirements may be summarized in *protection* and *proper feeding*.

An infant must be protected from shock, arising from various sources, from chilling, from cutaneous irritation, from poisons, from contaminated air and from irregularities of all kinds.

Overfeeding must be guarded against; it may result from an excessive quantity of liquid or from an excess of one or more of the proximate principles of milk.

The same rule will apply in regard to the use of drugs for infants.

The peculiarities of children may be considered under seven heads:

1. You are dealing, in children's diseases, with diseases of the organs by which children live.

2. In old age you are considering atrophic conditions and malignancy, while in young and middle life, prominence is assumed by diseases of occupation and habit, and by the disordered condition of the reproductive organs.

3. The intestinal canal has a predominating influence upon the general condition.

4. A deranged condition of the intestines causes changes above and below the seat of the primary lesion.

5. Intestinal irritation often produces high temperature, fretfulness, convulsions, delirium, and collapse.

6. Intestinal disorder often results in cutaneous eruptions.

7. It also has a powerful influence on the cardiac and vaso-motor systems.

In examining a child you should first aim to get his confidence, then a history of his illness from the mother, together with a history of the mother's previous condition.

In inspecting a baby note the different factors in his language, the condition of his skin, nose, mouth, and eyes, the character of his stools, and the weight and length of his body. His respiration is pathologically significant when it is jerky,

or Cheyne-Stokes, when there is an expiratory moan, when it is noisy or croaking, or when its rhythm is disturbed. His cry may be fretful, violent, and continuous, screaming, croupy, or aphonic, each variety being indicative of a particular condition. The pulse of a child is erratic and irregular on the slightest provocation, especially when there is gastro-intestinal disturbance.

The gross anatomical characteristics of a baby, as compared with an adult, are included in the head, chest, and abdomen.

The examination of the urine in young children is a matter of great importance and is too often neglected.

It will frequently reveal important conditions, which would otherwise be overlooked.—*St. Louis Medical Review*.

HEALTH MAXIMS FOR SCHOOL CHILDREN.

The editor thinks school teachers should teach their pupils the following rules:

1. That diseases are usually preventable. They are usually brought upon us by our own irrational living.

2. They are usually curable if detected in time.

3. Dirt should be avoided because it harbors germs.

4. Flies are scavengers, but the good they do is far overbalanced by the diseases they carry.

From the manure heap, the privy, the festering sore, the sputum, they go directly to the butter, the molasses, the sugar, the cream and milk and plunge in their feet, which are loaded with bacilli.

5. Mosquitoes are the intermediary for the propagation of malarial germs, and also the intermediary for the development of the germ of yellow fever. They can only reproduce in swamps, lagoons, water barrels, tin cans, or holes filled with rain water.

They can be exterminated by removing the water, or by covering it with kerosene oil, which prevents the larvae from breathing.

A properly used net can protect one from the attacks of these pests.

6. Rats, in addition to other objectionable qualities, are agents for the dissemination of bubonic plague and other diseases.—*Exchange*.

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IF HE HAD A TAIL.

Dressed in the latest and most approved motorcycle costume, with goggles all complete, the motorcyclist gaily tooted his way towards the Zoo. Suddenly he slackened, dismounted, and said to a small grubby urchin:

"I say, boy, am I right for the Zoo?"

The boy gasped at so strange a sight, and thought it must be some new animal for the gardens.

"You may be all right if they have a spare cage," he said, when he could find his tongue, "but you'd ha' stood a far better chance if you'd a tail."—*Medical Sentinel.*

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THE CONSERVATION OF CHILD LIFE.

During the year 1912 the general death rate of New York City was reduced from 15.12 per cent. to 14.11 per cent., or a little over 1 per cent. The rate for infants under 1 year was reduced from 111 to 105, or 6 per cent. In 1911 there were 15,053 deaths of babies under 1 year from all causes. In 1912 there were 14,289 similar deaths. The difference was 764. The number of births increased by 1,081. Had the deaths of babies increased in the same proportion there would have been 120 more baby funerals in 1912 instead of 764 less than in 1911, so that 884 infant lives were saved. These figures are by no means to be ascribed in great part to luck, weather conditions, etc., for the reduction in mortality has been chiefly in respect to those diarrheal, respiratory and contagious diseases that have been particularly campaigned against. But there is one potent factor which operates strongly in keeping up infant mortality which has not as yet been handled adequately, and that is ill health in prospective mothers. An attempt must be made to control in some degree prenatal and congenital factors entering into infant mortality.—*The Medical Times*.

WILL BODIES TO DISSECTING TABLE.

With the primary idea of making people understand that autopsies are in the interest of medical science, 200 prominent physicians of Brooklyn and Long Island are pledged today to will their bodies to the dissecting table. This action was taken at a meeting held in Hoffman Island by the Associated Physicians of Long Island. The medicos wish to dissipate the morbid impression which the general public maintains in regard to autopsies.—*N. Y. Med. Journal*.

TUBERCULOSIS AND TELEPHONES.

Dominion Medical Monthly, January, 1913. So far as is definitely known the tubercle bacillus has been recovered from a telephone swab but once. Prof. Klein found this in 1908 after examining a number of transmitters. In 1905 he had undertaken to conduct these investigations, but failed to find either the tuberculosis or diph-

theria bacillus. Spirta recently confirmed these investigations, and although his experiments extended over a year, he did not recover the tubercle bacillus in one instance. Some instruments used were in a hospital for consumptives by patients actually suffering from the disease. Spirta concludes "that the transmission of tuberculosis through the medium of the telephone mouthpiece is practically impossible."—*Med. Review of Reviews*.

HOUSE CAT BLAMED FOR INFANTILE PARALYSIS.
HEALTH BOARD SHIFTS RESPONSIBILITY
FROM FLY.

The officials of the Springfield, Mass., health department believe that they have traced the source of poliomyelitis, popularly known as infantile paralysis, to common house cats.

The department has discovered well developed cases in cats and will send a number of them to Boston for observation by experts.

The fly has been held responsible for poliomyelitis contagion, but the health department believes that the burden will be shifted to the house cat.—*Exchange*.

TORONTO had 130 cases of typhoid with 25 deaths in 1902; in 1903, 156 cases, 35 deaths; in 1904, 133 cases, 41 deaths; in 1905, 197 cases, 45 deaths; in 1906, 259 cases, 63 deaths; in 1907, 186 cases, 58 deaths; in 1908, 201 cases, 60 deaths; in 1909, 331 cases, 77 deaths; in 1910, 739 cases, 151 deaths; in 1911, 520 cases, 81 deaths; to December 26th in 1912, 276 cases, 54 deaths. Note—As the average mortality of typhoid is about 10 per cent., it is evident that many non-fatal cases were not reported.

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TABLE OF CONTENTS

ORIGINAL ARTICLES:—

Carbonic Acid Snow as Used in Obliterating Angioma; with a Case Report,

By George S. Foster, M. D.131

A Contribution to the Study of Sensory Aphasia,

By W. L. Wasson, M. D.133

Diagnosis of Diseases of the Blood,

By B. H. Stone, M. D.135

Entered as second class matter at Burlington, Vt., Post Office.

EDITORIAL139

NEWS ITEMS142

BOOK REVIEWS146

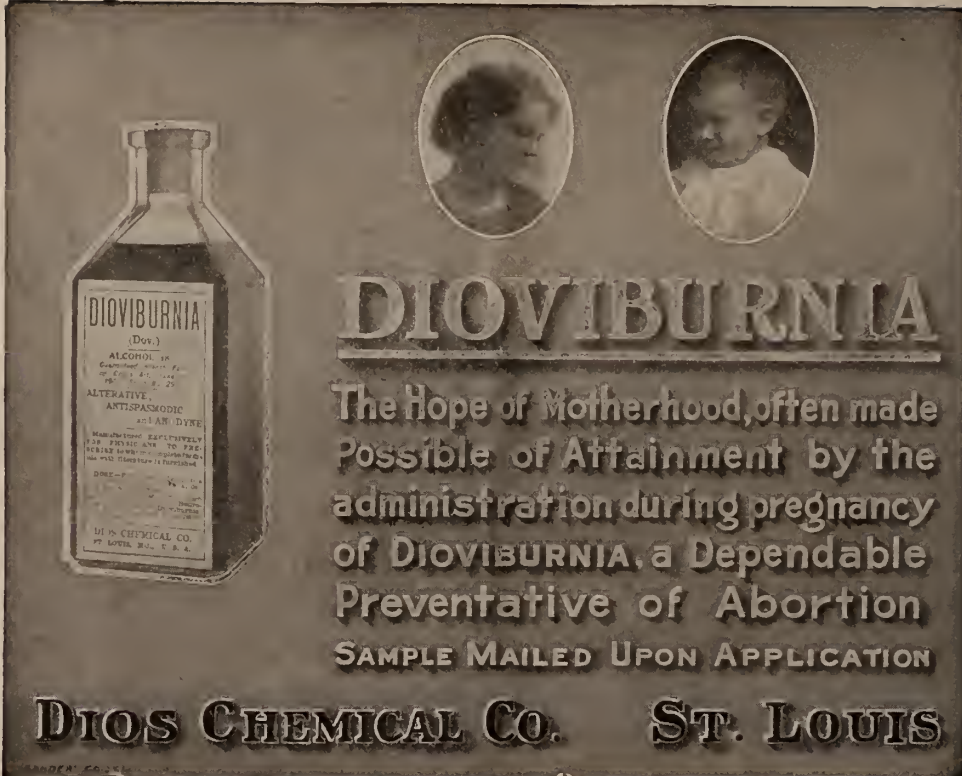
AN EPITOME OF CURRENT MEDICAL LITERATURE....147

THERAPEUTIC NOTESxii

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1867, 1868, 1869
1870, 1871, 1872
1873, 1874, 1875
1876, 1877, 1878
1879, 1880, 1881
1882, 1883, 1884
1885, 1886, 1887
1888, 1889, 1890
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May be maintained by proper nutrition and tone; a long convalescence can be shortened, and anemia and emaciation prevented by

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Which contains the vital elements of nutrition and nerve tone, as indicated by the full, normal physiological standard, namely

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is noted for its power to meet the severest clinical tests. This is best appreciated when it is remembered that it is in chronic diseases alteratives find their most distinct field of usefulness, and that chronic diseases try the skill of physicians to the utmost.

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WHEN THOROUGHLY UNDERSTOOD, MAKES PLAINER THE RAISON D'ETRE OF CERTAIN CLINICAL FACTS. THUS, A KNOWLEDGE OF THE CHEMICAL CHANGES IODINE UNDERGOES AFTER INGESTION, THROWS LIGHT ON THE CLINICAL PHENOMENA OBSERVED, BUT BETTER STILL AIDS IN DETERMINING WHICH IODINE PRODUCT IS OF GREATEST VALUE.

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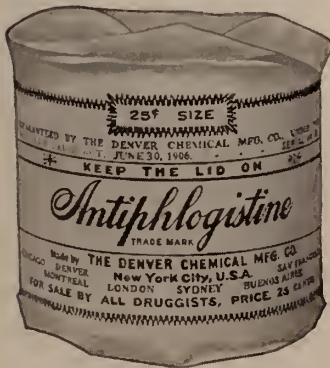
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THERAPEUTIC EFFICIENCY

SEASONABLE THOUGHTS

Vacation time presents its full quota of cases incident to the season. SPRAINED ANKLES, MUSCULAR STRAINS, SMALL JOINT INJURIES, INFECTIOUS INSECT BITES, BEE STINGS, SEVERE SUN-BURN, CONTUSED AND OTHER WOUNDS, while sometimes minor, may develop serious consequences if not given prompt attention.

ANTIPHLOGISTINE, applied thick and hot, will prove not only convenient, but a most satisfactory dressing, as it will relieve the pain, reduce the inflammation and limit the infection.



New 25 Cent Size

To meet professional demands for a small package of ANTIPHLOGISTINE suitable for dressing minor injuries, or for covering a limited area, we have placed upon the market a twenty-five cent package.

This is for your convenience or a protection for your patients.

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The Mulford Vacule

A New Method of Preventing Drug Deterioration

The Mulford Research Laboratories in a series of experiments proved the following facts,

That—The uncertainty attending the use of many important drugs is due to lack of standardization and to deterioration.

Ergot galenicals deteriorate in some cases 50 per cent. per year even when kept in tightly closed bottles.

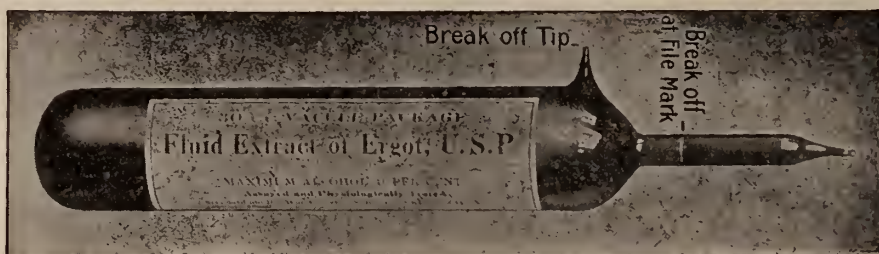
This deterioration is caused by the air held in solution in the fluid.

In the "Mulford Vacule Package" the air is removed from the liquid and the container is hermetically sealed under vacuum.

Physiological tests made with vacule preparations show that no deterioration occurs.

PERMANENCY GUARANTEED—The Vacule Package insures permanency.

UNIFORM ACTIVITY—Physiological testing and standardizing insure uniform activity.



A List of Potent and Standardized Drugs Supplied in Vacules

Tincture of Digitalis, U. S. P. Physiologically tested and standardized.

"Digital" brand of Tincture Digitalis. A fat-free tincture of Digitalis. Physiologically tested and standardized.

Fluid Extract of Ergot, U. S. P. Assayed and physiologically tested.

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SERODIAGNOSIS OF PREGNANCY..

Abderhalder, continuing his experiments, says that serum of the pregnant woman contains ferments which enables it to split of placental proteid and placental peptone; the serodiagnostic process of dialysis, described in detail, gives a positive result even fourteen days after delivery. It proves conclusively the presence of placental contents in the blood, and the introduction of placental material into the blood stream of the person to be examined, if that person was a male, for instance, might give rise to a descriptive conclusion. Observations point to the fact that placentas of different species of animals are biologically identical or are closely related. The methods described can be used in many other problems in the region of biology.

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ORIGINAL ARTICLES.

CARBONIC ACID SNOW AS USED IN OBLITERATING ANGIOMAE; WITH A CASE REPORT.*

BY

GEORGE S. FOSTER, M. D.,
Manchester, N. H.

Surgeon and Pathologist to the Hospital Notre
Dame de Lourdes.

That carbonic acid snow will cause angiomae to disappear has been perfectly demonstrated by Pusey, Jackson, Hubbard and others. During the past two years these men have carefully treated selected cases with unimpaired success.

HISTORY.

Before going into detail on this subject a brief history of its discovery as a therapeutical agent might not be out of place.

The late Dr. A. Campbell White of New York was the first man to use liquid air as an obliterator of so-called birth-marks. It was in 1899 that he first published his reports drawn from cases treated in the Dermatological Department at the Vanderbilt Clinic. Recently the supply of liquid air was stopped and, necessity being the mother of invention, Dr. William Allen Pusey of Chicago brought forth carbonic acid snow to take its place. In 1907, Dr. Pusey, at the Sixth International Dermatological Congress, held in New York City, demonstrated the methods of using this snow. Later Drs. C. T. Dade, George T. Jackson and S. Dana Hubbard, all of New York City, following Dr. Pusey's suggestions, came out with reports of astounding results. About this same time, upon the continent, Dr. M. Julinsberg began the use of this snow as a substitute for ethyl chloride.

DESCRIPTION.

Carbon dioxide or carbonic acid gas is a gaseous compound of carbon and oxygen. It is

manufactured in various ways, commonly by the action of hydrochloric acid on calcium carbonate and purified by passing the gas thus formed through a solution of permanganate of potassium. It is a colorless gas about one and a half times as heavy as air, with a faint odor and slightly acid taste. Its temperature is 31 degrees centigrade. By mixing it with ether and allowing the same to evaporate, the temperature can be lowered to 100 degrees centigrade. This gas is caused to liquefy under pressure of about 900 pounds to the square inch. Its comparatively low expansive power allows it to be delivered in steel cylinders such as are used by the druggist about the soda fountain. At one end of these cylinders is a brass valve outlet controlled by a socket wrench or wheel, according to the make. Directly opposite the vent holes is a safety valve set to 1,800 pounds pressure. This valve should be let alone, as it simply protects from explosions by variations in temperature.

Thus it will be seen that these cylinders can be kept in the office without danger.

TECHNIQUE.

The cylinder containing the gas should be suspended by proper supports, from some convenient wall space in your office. The valve end should be a trifle lower than the base so that the gas will easily roll out.

This also prevents the valve from freezing, thus preventing leakage by improper shut-off.

The snow may be gathered in several ways. The two best methods are by using a properly made chamois leather bag which should fit snugly about the outlet and be supported by covering with turkish towels or the like. Dr. Hubbard has invented a brass tube container, lined with chamois leather and threaded so that it will screw on to the valve outlet.

The valve is opened slowly and evenly until a bluish gas is seen to escape about the upper edges of the container. Soon, in 30 seconds to one minute, this bluish color is replaced by particles of snow sputtering out.

*Read before the Manchester Medical Association April 11, 1913.

Following this a confined pressure sound is heard, and at this state the valve should be closed.

The container is then removed and the snow spooned out and moulded into properly sized cubes, according to the dimensions of the area to be treated. In moulding, a piece of three or four-ply gauze protects the fingers of the left hand, while a wide blade scalpel presses the snow into cubes. In applying, the same gauze should serve as a glove, thus protecting the surgeon's hand. Generally one or two c. m. is a sufficiently large surface to which the snow should be applied at any one time. At first only one or two applications without pressure should be made at a single sitting. After the individual reaction degree is determined by a few sittings the number of applications to be made at a single sitting may be increased and the amount of pressure used also gradually augmented. At first, twenty seconds is long enough for a single application, later this may be increased up to a minute and a half if needed.

REACTION FOLLOWING APPLICATION.

Naturally the longer the snow is kept in contact with the skin, the greater must be the reaction. The same also applies to the amount of pressure used. Greater pressure causes greater depth of action and thereby more pronounced and prolonged reaction.

When the snow first meets the skin there is a sharp, burning sensation which disappears in about five seconds. This same sensation reappears when the area again becomes warm, recovering from the anesthetic and continues for about thirty minutes. Following this, in three to six hours, a bulla will form. In two to five days the serum within this bulla becomes inspissated, later desiccation sets in and one or two days later the scab is firm and completely dried. If irritation persists during the first stages of this reaction, cold boric acid solution compresses may be applied.

The scab should not be softened by ointments, but allowed to drop off at will, and after recovery from the reaction is complete a second treatment may be given if necessary.

Thus the treatments can be carried on indefinitely until eradication is complete. Never make a second application until the scab has fallen off. The bulla should not be pricked.

Reaction is greater in those who have senile and poorly nourished skins, as it also is in blondes compared with brunettes. In applying the snow these two factors should be kept in mind.

PATHOLOGY.

This is that of any freezing process except that quick recovery to normal temperature results. The skin covering the angioma is completely frozen, as also are the enlarged blood vessels within the tumor. The circulation is thereby stagnated or retarded, and coagulation of blood within the uppermost vessels is permanent. By cutting off the blood supply sloughing takes place and the upper layers of vessels are removed when the scab falls off. During the reactionary stage the great amount of serum secreted causes a soft base to be formed below the slough and the new skin formed readily closes the gap. Thus each successive layer of vessels is removed until permanent obliteration is the result.

CASE REPORT.

Master D., brunette, age 8 months, normal delivery at birth. General appearance and health good, breast fed to 8 weeks, then bottle. Family and past history unimportant.

PRESENT ILLNESS.

When one week old mother noticed red and raised blemish over right eye. Mother says this has increased in size very much.

SURGICAL DESCRIPTION.

Angioma over right eye just above brow. This tumor was circular, and elevated above the surrounding skin to the extent of one quarter of an inch. The diameter of this tumor was 2.5 cm. It was bright red in color, and could be blanched by digital pressure with no reduction in size.

TREATMENT.

Twenty-eight applications of the snow were needed before complete disappearance of tumor was accomplished. Applications were begun on 20-second time and gradually increased to 1½ minutes. At first no pressure was used but later more force was needed. Spaces of four days to three weeks were needed for complete recovery from reactions.

END RESULT.

Well marked disappearance of blemish leaving a thin, white, shiny scar, noticeable only at close range with anticipation of complete absorption as child develops.

NOTE.

Since the above case was reported others have been treated, requiring less time and equally good results. Experience has shown the writer that more aggressive treatment in the beginning shortened the course and with present knowledge of these cases I believe the case here reported could be given just as good a result in five or ten sittings.

No matter how extensive the area of these disfigurements they may all be successfully treated if patience and perseverance predominate. Many people now bearing similar marks upon exposed surfaces live under great abashment. It is for the profession to see that such patients are properly cared for.

967 Elm St.

A CONTRIBUTION TO THE STUDY OF SENSORY APHASIA.

BY

W. L. WASSON,

Medical Director Vt. State Hospital for the Insane,
Waterbury, Vt.

In the August 1910 issue of the Vermont Medical Monthly a report of a case of aphasia was made by the writer which report is here repeated in full along with a description of the findings as revealed at the autopsy.

The following case is cited as one of sensory aphasia in which the symptoms are referable both to the auditory and the visual areas, although the extent of which the visual area may be involved has been difficult to determine.

C. R., female, about 80 years old, admitted to hospital July 16, 1907. History: About one and one-half years prior to entering the hospital her friends noticed a mild degree of mental deterioration, made manifest by irritability, suspiciousness and defects of memory, processes which are more or less normal in those of advanced age. In October, 1906, after working rather harder than usual house cleaning, the culminating act

of which was the cleaning of two cisterns all by herself, she sustained an apoplectic seizure of slight character, sufficient to confuse her for a short time and to slightly paralyze the right arm and leg. The paralysis was quickly recovered from, but since then she has been unable to read, to write, to speak correctly, or to understand much of what is said to her. She has been examined many times in the hospital, and the more important points of such examinations, as taken from the case records, are as follows:



Normal left cerebrum stained black to show area of degeneration.

There appears to be no abnormality of hearing as she hears a watch readily with either ear. She was shown a tablet, a pencil, a watch and told to pick up her watch, she picked up the pencil, and again did so when asked to select the tablet. She was also shown written directions, but was unable to understand them. Her name was then written and she was asked to copy it, she attempted to do so, but only succeeded in making a series of wavy lines; at a subsequent examination she did manage to form several letters of her name from a copy but the intervening letters were made up of wavy lines. Shown the word cat. Spelled it Ya-a-t—"Kitty" "Cat." Shown dog, but could make nothing of it, exclaiming, "Oh, I can't, doctor, I can't." Lays head on table, "Its too wuxan." Shown letters of alphabet, which she immediately attempts to name, but only succeeded in calling two letters, b and o by right name. Was again shown the word cat and spelled it X-e-t. The above examinations show that alexia, or inability to understand written words is pronounced. Was shown a pencil and its name spoken, "Yes, wench." A pen was shown and named for her, "Yes, Peters." Shown a key

and name spoken, "Oh, yes, wench, Oh, I can't." Shakes head. "Oh, I can't, I wish I could, doctor, I wench, bunthen, doctor, but I can't, forthin." Can usually understand when asked to put out her tongue, and does so, but fails to comprehend when asked to touch her nose, eyes or ears. When these directions are given her, she will blink, open her mouth, put out her tongue, take out her false teeth in a vain endeavor to do as she is asked.

There is no mind blindness for objects, as she recognizes objects readily and their uses. She was found one day by the nurse watering the plants, and she made known her wish for a handkerchief by going to the box room, where the clothing is kept, and picking one up. She also has ideas of beauty and the appropriateness of things, she showed the doctor a piece of rather gaudy cloth, a sample of a wrapper which was being made for her, and by her manner exhibited her objections to it, at the same time pointed to sample of more sombre hue, saying, "I like that," and pointing to the cloth in her hand said, "No, not for me."

She does not recognize the value of figures, so is unable to select the figures expressing her age from a series shown her. She does, however, keep track of the days of the months by means of a calendar hung in her room; this is probably done by the relative position of the figures, rather than by any real understanding of their value, for when the day of the month is set down for her among others, she is unable to pick it out.

Physically, she appears in good health for one of her age, nutrition is good for she has a good appetite; sleeps poorly; heart action is strong and regular, no murmurs. Repeated examinations have failed to reveal any hemianopsia, showing that if the visual area is involved, the destruction of tissue is limited to the cortex and does not dip deep enough to involve the optic radiations.

In her case there is not a total destruction of the auditory area, but a partial one, as she is able to understand the meaning of some things said to her. The chief disturbance seems to be an inability to recognize the names of things, a condition known as amnesia verbalis.

Reverting to our scheme again, we find she can hear sounds.

She can see.

She cannot see words as such.

She can recognize objects.

She can speak voluntarily (paraphasia.)

She cannot repeat words.

She cannot write either voluntarily, to copy, or to dictation.

The lesion in this case evidently involves the parieto-sphenoidal branch of the Sylvian artery, which supplies the angular gyrus, and the two upper temporal convolutions.

The symptoms manifested by patient up to the time of her death from pneumonia remained practically the same as those detailed above. It is to be remarked that a very few directions could always be understood by her; one of which was, "put out your tongue," a request she never failed to react to in an appropriate manner; she also comprehended the significance of any inquiry as to how she felt; her comprehension of familiar objects remained fairly good, but this faculty began to exhibit degeneration before the end. For a long time, doubtless in a more or less vague way, she recognized the people with whom she formerly was much associated; but during the last few months of her existence it was not certain that she could do this. She always had a pleasant way of greeting her callers, but latterly there was no difference in this respect between total strangers and her old friends.

Amnesia for spoken words always remained very marked: the symbols for proper names were nearly if not quite annihilated; a few expressions she could understand but the vast bulk of what was said to her passed without significance—the auditory symbol was no longer able to link itself to the higher psychical areas. In other words the auditory center was practically isolated from the other parts of the brain.

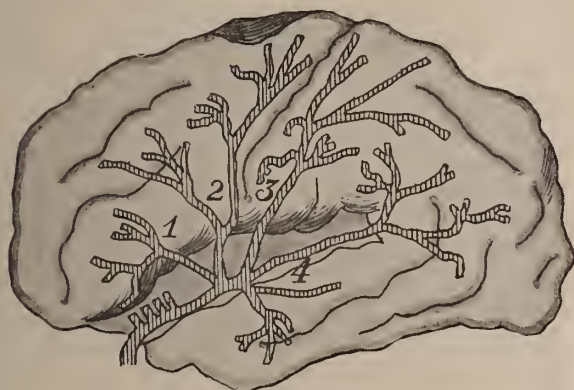
So far as written words were concerned she lost all comprehension of their meaning; she knew what writing and printing represented; that there was a language association with the written words, for when shown printing or writing she sometimes, during the early part of her illness, would make some attempt to read, but later she refused to even try to do so. There was no disturbance of vision.

In the realm of speech, jargonaphasia—word salad—remained characteristic. At times she would give expression to coherent and relevant sentences or phrases, but this was seldom.

She died Feb., 1913, of lobar pneumonia after a short illness. At the autopsy the brain was carefully removed and the following points

noted: the dura separated easily from the calvarium; a general and well marked sclerosis of the cerebrals was present, especially of the middle cerebrals; an area of softening within the "zone of language," on the left side. The area involved was that supplied by the parieto-sphenoidal artery, lying mostly in the fissure of Sylvius; it extended backward along the floor of the fissure of Sylvius, destroying the parieto-sphenoidal annectant; the posterior portion of the superior temporal convolution; the posterior tip of the middle temporal convolution; and the lower portion of the angular gyrus. The upper part of the angular gyrus did not appear to be affected, nor did the gyri operi, which latter form the gray matter of the Island of Reil. The softening is superficial and does not appear to involve the deeper structures, thus explaining the absence of hemianopsia from the clinical symptoms.

The small artery which feeds this part of the brain had been occluded by sclerosis, a change already spoken of as being very extensive. Right cerebrum weighed 430 grams; left, 400 grams.



1. Ext. & Inf. Frontal Artery.
2. Ascending Frontal Artery.
3. Ascending Parietal Artery.
4. Parieto-Sphenoidal Artery.

NOT TREATED RIGHT.

Little Mary's father had denied her a pleasure which she had confidently expected to enjoy. That night, when she said her prayers at her mother's knee, she concluded with this petition:

"And please don't give my papa any more children. He don't know how to treat those he's got now."

DIAGNOSIS OF DISEASES OF THE BLOOD.

BY

B. H. STONE, M. D.,

Burlington, Vt.

A discussion of the diagnosis of all the diseases of the blood is a subject of prohibitive breadth for it must be borne in mind that practically any diseased condition of the body or any part, is reflected to some extent in the circulating fluids. There are, however, a certain number of affections in which the cause seems to act particularly on the blood, either in its circulating condition or in the germ centres where its cellular elements are formed. These are properly the blood diseases, and I shall limit myself strictly to the consideration of these conditions—pernicious anemia, chlorosis, secondary anemia, aplastic anemia, in which the oxygen carrying power of the blood is especially affected and those conditions which are characterized by a persistent increase of white cells in the blood, the leucocythemias.

PERNICIOUS ANEMIA.

Pernicious anemia has been a subject of great dispute and we have as yet little definite knowledge about it. It has been said that our differentiation of pernicious anemia depended upon the fact that the cause has not yet been discovered and that when such a discovery is made, this will fall into the class of secondary anemias. There is, however, a definite distinction between an anemia of this type and the form of anemia which is secondary to many obvious conditions.

Primary pernicious anemia may be defined as a disease of the bone marrow resulting from the absorption of some toxin probably of multiple origin which acts on the hematogenic structure of the *bone marrow* interfering with its functions and causing a deviation of its normal regenerative process to a foetal type. This action on the bone marrow may be preceded by hemolysis, but this is not the essential characteristic of pernicious anemia. This effect on the bone marrow and the appearance of megaloblastic regeneration is the real point of difference between a true pernicious anemia and a

secondary anemia. The patient with pernicious anemia is apt to come under observation first with a complaint of muscular weakness and at such a time is apt to be found quite far advanced in the disease. There is no other form of anemia in which patients can go so long without realizing their condition. The peculiar lemon yellow pallor, breathlessness, feeble pulse and fever, present a picture which is not easily mistaken. If we find added to this a history of sore tongue, symptoms of pain or discomfort in the epigastrium, vomiting, with a diminution of hydrochloric acid, hemorrhages into skin and mucous membranes with nervous symptoms varying from the subjective symptom of tingling or numbness in the legs and feet, to definite symptoms of a degeneration of the posterior or lateral columns, resembling tabes, the diagnosis is fairly clear. But in many cases these symptoms are vague and uncertain, so that practically, a blood examination is necessary for a positive diagnosis of this important condition. The blood changes are definite and unmistakable. A diminution of red cells, the presence of large dark staining red cells, the presence of nucleated red cells of the megaloblastic type, with a reduction of hemoglobin, less in proportion to that of the cells, producing a hemoglobin index above the normal, and a leucopenia, presents the characteristic picture of this disease. In addition to this, the cells usually show evidence of hemolysis by the presence of many small distorted cells and many cells showing polychromatophilia.

The high hemoglobin index is the most important diagnostic sign and in practically no other condition do we find this universally present. This increased Hg content is accounted for by the presence of many large cells containing more than the normal amount of hemoglobin. The fragility of these abnormal and improperly matured cells accounts for their rapid destruction and the resulting anemia.

CHLOROSIS.

In this condition again, the etiological factor has never been clearly settled. The fact that it is a disease which affects girls at about the beginning of puberty suggests that the establishment of the function of menstruation may have something to do with the condition. The marrow fails to respond properly to the in-

creased strain put upon its hematogenic functions. The disease is characterized by a subjective symptom of breathlessness, fatigue, drowsiness, palpitation. The patient presents symptoms of pallor associated with a peculiar greenish tint but this does not usually appear until the blood changes are well marked. Digestive disturbances and great caprice of appetite are among the chlorosis symptoms. The breathlessness is apparently associated with an actual dyspnea from the failure of the oxygen carrying power of the blood. Various cardiac murmurs usually appear being mostly referred to base of the heart. These are apparently explained by the excessive fluid and the over-filled chambers. The blood picture is very dissimilar from that of pernicious anemia and seems to be a serous plethora with a failure of hemoglobin production. The number of red corpuscles per cubic millimeter is usually considerably diminished but low counts are rarely met with. The amount of hemoglobin is always diminished and greatly diminished in proportion to the red corpuscles, the index being considerably below 1. The color of the individual cell is low, some of them appearing as mere rims. The cells are small and in severe cases may show great deformity in shape. Nucleated cells are rare. The changes do not affect the leucocytes which remain normal.

Secondary anemia may arise from a large number of causes such as hemorrhage, active hemolysis from such conditions as cholemia, severe sepsis and malaria, improper nourishment and unfavorable surroundings and exhausting diseases. The symptoms are largely masked by those of the causal condition, anemia being usually noted by feeble pulse, hemic murmur, fainting which occurs with change in posture, palpitation and dyspnea on slight exertion, edema and petechial hemorrhage with certain vague nervous symptoms. The blood changes may be diverse, depending again upon the cause, but the changes common to all and representing uncomplicated anemia are a proportionate reduction in red cells and hemoglobin, the index never going above 1 and varying from that to the chlorotic type depending upon the acuteness of the cause. If this be a severe hemorrhage, there is an immediate dilution of blood by the abstraction of fluid from the tissues to fill the depleted vessels. The cells per

cubic millimeter may fall as low as one million and the hemoglobin is reduced proportionately. Some cells are destroyed by the dilution so that maximum anemia is not reached for from one to four days. Following this, there is a regeneration of cells, many of the nucleated normoblastic immature type, containing less than the normal amount of hemoglobin, giving a color index below the normal. The leucocytes vary in accordance with the cause of the anemia.

Aplastic anemia seems to be a type of severe pernicious anemia in which there is an actual paralysis or exhaustion of the bone making function and is characterized by a grave anemia with the absence of any nucleated cells showing regeneration. It may be due to an overwhelming action exerted on the bone marrow by a number of toxins or to an inherent vulnerability or weakness of the marrow which renders it unable to respond to even slight increased demand upon its regenerative function or it may appear as the last stage of a pernicious anemia when it indicates the final exhaustion of a degenerated bone marrow. The preceding diseases affect principally the oxygen carrying power of the blood. There are some closely related blood diseases which affect primarily the white cells.

THE LEUCOCYTHEMIAS OR LUKEMIAS.

These are diseases characterized by useless and lawless overgrowth of certain cells of the marrow and an anemia resulting secondarily from interference of erythrocyte degeneration in the marrow produced by the overgrowing white cells. In the lukemias the bone marrow is the primary starting point and the disease is akin to tumor formation, differing from this particular in the fact that it does not have a single focus of origin but affects simultaneously all of the hematogenic portions of the marrow. The enormous increase of leucocytes results in a packing of the other tissues of the body, particularly visceral portions with lymphocytes to the extent of interfering with nutrition and function. The symptoms are largely accounted for by this condition. The onset of this disease, for the leukemias can be considered as one in their symptomatology and pathology, is insidious. A slight enlargement of a group of glands of the spleen or an extravasation of blood into the skin or mucous membranes, usually giving the first warning. There are two well defined types, the

lymphatic and myelogenous, but oftentimes the condition present is of a mixed type and some authors are inclined to believe that the two types are simply stages in the same disease. In acute lymphatic leukemia a temperature is usually present averaging about 102 F. In no other form do we have this fever. There is usually a waxy appearance of the skin and a pallor of the mucous membranes. The spleen is enlarged to some extent. Attacks of epistaxis and bleeding from the gums are very common. Purpuric spots may appear on the skin and any slight bruise is apt to result in an ecchymosis out of all proportion to the cause. The other symptoms are those common to rapidly progressing anemia. In the chronic form every gland in the body is apt to be enlarged and the spleen may reach an enormous size. Other symptoms are those of interference of nutrition and the function of the organs by pressure of the leucocytes within. Symptoms of this sort should suggest the diagnosis but to be positive, we must resort to a blood examination. The blood picture shows a leucocyte count always increased but much higher in the chronic than in the acute forms. An average of one hundred thousand leucocytes is usual in the chronic forms. A much lower amount from seventeen to twenty or thirty thousand is usual in the acute forms but in all, and *this is the essential point*, the lymphocytes are in great preponderance, from ninety to ninety-five per cent. Accompanying this is some slight anemia not often dropping below three million and one-half or four million and with this, the presence of some normoblasts. The important point to remember is that the percentage of lymphocytes is more important in the diagnosis of this form of leukemia than the actual total numbers.

In the *myelogenous form* of leukemia the granular type of cells are those affected and the myelocytes or parent cell of the normal circulating granular leucocytes is the most characteristic cell. In this form of the disease the symptoms are particularly insidious and the course long and the spleen usually greatly enlarged and the lymphatic glands much less so. The white cells are usually much increased in this form of the disease and may reach even to a million or more. This increase is largely in myelocytes but we also have an increased number of all the granular cells. The anemia is of the secondary anemia type and red cells and

hemoglobin drop in proportion. Nucleated red cells of the normoblastic type are common.

It will be noted that the diagnosis of these five blood conditions, pernicious anemia, chlorosis, secondary anemia, lymphatic and myelogenous leukemia all present features by which they can be diagnosed in typical cases from the blood side alone. Of course there are atypical cases of all of these conditions when a complete examination is necessary and in which the diagnosis may be obscure even then.

The typical blood picture of a pernicious anemia shows a great proportion of large dark staining cells, large nucleated cells, interspersed with distorted poorly stained and fragmented cells. The film from a typical case of chlorosis shows small cells, *faintly stained*, some distortion, and a few nucleated cells of normal size. The film of a secondary anemia shows distorted cells, cells of various degrees of staining abnormality, some nucleated red cells but none of the large cells characteristic of the pernicious anemia or the faded cells of a chlorosis. A slide from lymphatic leukemia shows usually a large increase in white cells, mostly of the lymphocytic type, while a blood slide from myelogenous leukemia shows the presence of enormous number of white cells, a very large proportion of which are granular cells, mostly myelocytes, a type which is never present in normal blood and rarely present in any of the other conditions.

I anticipate that these conditions are much more prevalent than formerly believed and in fact we find them much oftener now than formerly and it is probable that many cases yet to go undiagnosed. With a method of diagnosis so simple and positive as the making of a blood slide and staining it, at hand, these errors should not occur.

LEUCOCYTIC INCLUSIONS IN SCARLET FEVER.

Kretschmet concludes: 1. Döhle's leucocytic enclosures are found in all freshly examined cases of scarlet fever. 2. The presence of these leucocytic enclosures in other diseases is rare. In diphtheria and septic processes they are of more frequent occurrence. 3. Since the diseases in which the enclosures are present can easily be differentiated from scarlet fever, the examination of the blood in this disease is of great value in making an early diagnosis. 4. The enclosures

are not found in all cases of scarlet fever and are not specific. They are probably reactionary bodies of the leucocytes against the toxic products of the bacteria.

Dr. B. M. Alford, a veteran of the Civil War and for twenty years surgeon of the Southern Pacific and Santa Fe railroads, at Tulare, died August 15th at his home at Alameda, at the age of 79 years. Death was due to paralysis.—*Pacific Med. Journal*.

HER LOOKS.

Little dabs of powder,
Little specks of paint,
Make my lady's freckles
Look as if they ain't.

—September *Lippincott's*.

JOHA, SALVARSAN PREPARATION.

Lindenhein found that joha possesses all the advantages of salvarsan. It rapidly influences the skin and mucous membranes in malignant lues. With proper technic no disadvantageous side actions resulted. It is easily given to ambulatory patients. It is contra-indicated in diseases of the heart, including dilatation.

Cimicifuga is effective in relieving after-pains.

Small doses of bryonia are useful in atonic dyspepsia.

Pilcher declares hormonal should not be given during shock.

Chloroform will sterilize the hypodermic syringe effectively.

Look out for coughs in children who have a tendency to hernia.

Heynemann claims there is a physiologic insufficiency of the liver in pregnancy.

Drink water slowly, a little at a time, and it may be taken at meals with impunity.

Vermont Medical Monthly.

*A Journal of Review, Reform and Progress in the
Medical Sciences.*

H. C. TINKHAM, M. D., }Editors.
B. H. STONE, M. D., }

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EDITORIAL.

THE VERMONT LEGISLATURE AND THE IDIOT.

"That bucolic aggregation of farmers comprising the Vermont Legislature signally maintained its time-honored reputation for reactionism by sustaining Governor Fletcher's veto of a bill providing for the sterilization of degenerates and criminals.

We are told that the rocks and rills and wooded hills of the Green Mountain State resounded—as though to the concerted bray of ten thousand jackasses—when the glad tidings were announced.

This is encouraging, if true. For why should any ignorant charlatan of a doctor presume to interfere with the benign processes of Nature to replenish the earth with idiots, incompetents, and criminals?

Why should any scientific zealot submit to a Legislature—which cheerfully and blithesomely waits until a pregnant woman is delivered of her

child, and then hangs her—a provision contemplating the abolition of congenital idiocy, criminality and degeneracy?

What on earth would future generations of Vermonters do for congenial companionship if all the idiots were prevented—by humane surgery—from coming into existence?

It is unthinkable. Thank goodness, we have at least 150 ignoramuses in this stand-pat Legislature who have sense enough to forsee this exigency, and prepare for it by granting fullest and freest powers to the procreant degenerates who infest their verdant state.

It is with pain and humiliation that we turn from that fair picture and gaze upon this; that we descend from the mountain top, and batten on the moor. But alas, pity 'tis, 'tis true.

The fateful report says "The lower House of the Oregon Legislature today passed a bill providing for the sterilization of habitual criminals and chronic insane persons. The announcement of the vote was greeted with cheers. The State Board of Health endorsed the measure."

'God help us all,' especially us idiots. What's to become of us now? Who knows—or cares?

And they greeted the report with cheers!!

Some fair day, in the year 2019, the Vermont Legislature will awaken from its deep sleep, roll over, stretch, and ejaculate the time honored: 'Where am I at?'

And a Greek Chorus of idiots, degenerates, and thugs will shout 'Right here—where you always were. Go to sleep again.'

This specimen of near-wit clipped from an Exchange is a fair sample of the sort we often see directed toward Vermont and especially its legislature. The writer probably does not know that the Vermont legislature was one of the first to establish a State Board of Health, the second to establish a Laboratory of Hygiene, the first to establish a School of Hygiene which all

Health Officers are required to attend. The fifth to require the reporting of venereal diseases.

While the writer regrets exceedingly that the Governor thought best to veto the sterilization bill, he doesn't fail to recognize the fact that the Vermont legislature first passed the bill and sustained the Governor's veto only when it was backed by an opinion of the Attorney General, that the measure as passed was unconstitutional. This tirade is not argument. It fails to recognize that there can be honest and fair differences of opinion, it is a scurrilous attack upon a body of men which in defense of the writer it is fair to assume he knows nothing about.

We feel very sure that the Vermont legislature compares very favorably in intelligence, sanity and progressiveness with that of any other state. It is no sign that that body is composed of "ignoramuses" because they wish to be sure that a bit of legislation is within the provisions of the constitution before they pass it. We wonder to what extent the provisions of the New York sterilization bill are being put into effect.



WHAT'S THE MATTER WITH THE STATE MEDICAL SOCIETY?

To begin with, it's all right. If you don't think so, there is unquestionably something the matter with you. Seeing, therefore, that we are unanimously agreed as to the status of the society, why is it that some men drop out before their natural time? Our wide-awake State Secretary recently felt compelled to send out letters to the secretaries of the county societies inquiring into the *causus mortis intra vitam* (I mean this to translate "defunct while still alive"). Being naturally great believers in conservation, it worries our state president and secretary fearfully to have one-tenth of one per cent of a man drops out of the roster of the society.

All of us too, being impressed with the strength of union, must feel at least somewhat disappointed to note that here and there some man who signed the constitution and by-laws of his county society and thus indirectly that of the state association, becomes remiss in his avowed duty. It is as if he said "I do not want to support you or your policies any further."

The percentage of delinquents is not so small or inconsequential in any state medical society in the United States as to pass off unnoticed. Verily there must be general reasons why such men allow their promises to uphold and assist the endeavors of the state society to lapse. For obvious reasons let us rule out immediately the man who gives up the practice of medicine. We must be rather lenient too in judging the men who cannot afford to keep up their membership. They are unfortunates more deserving of pity than censure. These as a rule are practitioners in rural districts whose welfare is always parallel with the condition of crops, railroad privileges, etc.

You may find it hard to believe but there are some men who are dropped from the ranks through sheer neglect on their parts to keep up their membership. They belong to that class of mental cripples who strew the path to every goal. A state society is perhaps better off without them. So is the community. Neglectful persons must not be the guardians over human life or limb. Indeed, one good reason why some men drop out of a state society is because it is so easy for them to join it. You know the old adage applied to money, "Easy come, easy go."

Who are the men who usually become obnoxious to the state society? Invariably those who really were never entitled to membership at first. "But who is to be the judge of that?" you ask. Not you nor I to be sure. Rather create conditions which will test a man's desirability in the organization. Let the state society establish

three gradations of membership: one extending over a year to be known as applicant member, another over the same period or longer, as associate member and finally fellow. This procedure would put a goal before a man and the chances are that he will walk the path of the righteous during his probationary period to fellowship, and after walking in this path some time, he will acquire the habit!

Sad to relate, there are a few men who drop out of the county societies because of differences with the officers, or some members. These are hopeless cases in most instances, hardly worth the process of revivification.

Seldom, if ever, is a state medical association in fault towards any of its members. It is one of the most potent factors in helping a man to stay ethical. It gives him the moral support without which he must suffer a good deal of discomfort. Because of his high calling and usual superiority, the physician is prey to many undeserved attacks. These attacks would fell many in our profession were it not for the strength of union exemplified in the form of the state society. No man who has at all received the protection of the state association has any right to sever his connections without a good and sufficient reason.

To a great extent the state medical society is a fraternal organization in that men presumably of the same social level are banded together for mutual protection and the encouragement of kindred interests. The man therefore who drops out indicates by his action one of two things—either he finds himself of a lower level and fears the association with superiors or else the association is distasteful to him. In the latter event, the least that can be said about him is that he is "peculiar."

State societies make health and state examining boards possible, and a number of frauds and maligners impossible. Membership in such an organization therefore, means immunity against

human parasites and contact with hygienic progress. They who neglect to support the state society, thus unwittingly aid in the perpetration of the pests which beset the mental and physical fibre of society.

It is a fact that a number of men drop out of the state society, because they believe that being in it is a poor business proposition for them. In other words, they are not getting their money's worth. Such individuals have mental strabismus complicated by cerebral astigmatism. The few paltry dollars they would perhaps spend during the year on things to hurt them, they grudge to the welfare of their confrères, let alone the safety to their own necks.

But because we are dealing with a business proposition primarily let us see what part that factor can be made to play in holding the men in line.

Above all, educate the public as to what the state medical society stands for. The community should be taught to appreciate that the state society acts as its guardian against the visitations of the unfit, the charlatan and the criminally-bent in the practice of medicine. The state medical association stands ready to expose and help weed out the quack. Also that the state medical society aims to bring its members together at least once a year, for the exchange of ideas, gained by experience and the dissemination of the newest in medical knowledge. Such meetings cannot help but send the members back to their charges, infused with a better understanding of their vocation and more fit to deal with the ills of the human body and mind.

Let but the public understand the aims of the society and it will become hard for a man to practice medicine without his allegiance to the above named principles. The public will make it hard for him. Insidiously of course, he will be forced into joining an organization whose care is the physical welfare of the community. When the

laity will begin to ask a man "Are you a member of the state medical society?" and regard him suspiciously when he isn't, medical ethics will spread rapidly through the ranks of the practicing physicians, for the state society stands above all, for ethical practice.

One must however, give heed to the plaint of the man who has been a member of the state society for some years and feels he gets very little in return. True, the fault is his, if he does not avail himself of the meetings of the state society or gather courage from the moral support of a body like that, which makes up the organization. We might however, do something not only to hold him but to awaken a live interest in him.

Now what's the matter with this suggestion—if a man's membership in the state society extends over a certain period, and he has been in regular attendance at the annual meetings during this period, why not recognize that fact in the form of some testimonial?

Wait a moment. Don't pooh-pooh this! Consult the inner recesses of your own make-up. Wouldn't you like something to look at—(Oh, no, not to show to outsiders)—once so often which testifies to the fact that you have taken so many courses of instruction annually under the direction of the state medical society?

A man's dues to the state association ought to begin to decrease after he has been affiliated with the society for a long period. When his dues cease altogether, let him automatically become an honorary member, the same to be announced in the society's transactions.

At the annual meetings, set apart one or two days for case reports only. Let every member, including those who are not on the regular program, present one or more interesting or instructive cases which have come under his observation, during the year. More men would come

to the annual meetings and more would therefore stay in the fold.

Because the state society is an organization of a public nature, some feel that it is impersonal as far as their individual welfare is concerned. That is an erroneous conception of the state society's attitude. The more personal factors are put into the state society's business the more it is able to hold its own in the enactment of laws that concern the physician and his practice.

Let us therefore take a live interest in the state society. Let us study the causes of decrease of membership, and teach where teaching is possible. There was a time in the history of the world when single individuals were the units in all activities. In modern civilized life, it is becoming more and more impossible for a single individual to be the unit factor in any one movement. It requires a group. The state medical society is the group-unit in medical practice today. Let us stay united in that body, that we may progress as the organization progresses.

BARNET JOSEPH, M. D.,

Secretary to the Burlington and Chittenden County Clinical Society.

NEWS ITEMS.

Dr. and Mrs. I. S. Coburn are the parents of a daughter born May 4th.

Dr. Edward T. Duffee, class of 1903, University of Vermont, College of Medicine, formerly located in Gardner, Mass., has opened offices at 147 Angell St., Providence, R. I. At a recent meeting of the board of trustees of the Sales Memorial Hospital, Pawtucket, R. I., Dr. Duffee was appointed chief of clinic and chief surgeon to the Eye, Ear, Nose and Throat department.

The medical department of Dartmouth will continue the first two years in medicine as a preparatory course for entering the third year class

of larger schools. The course will be much amplified over what it has been heretofore.

Dr. William Lloyd of London, a fellow of the Royal Society of Medicine, who has a high reputation as a throat specialist, and is much consulted by singers, in an interview explains the physical arrangements which make Caruso a unique singer. "Among other things I have observed," he said "is the abnormal length of the vocal tube. The distance from the front teeth to the vocal chords is half an inch longer than in any tenor I have ever seen, accounting to a great extent for the extraordinary compass, pitch and volume of his voice. Another point is that the vocal chords are fully an eighth of an inch longer than those of any other singer I have examined. They are also extraordinarily vibratile. When he sings a C sharp they vibrate 550 times a second, which is phenomenal for a man, although in a soprano the vibration is much higher, Tetrizzini for instance on a high note registering 2,200 vibrations a second."

Dr. Francis Parker Kinnicutt of New York City died May 2nd. Dr. Kinnicutt has been professor of clinic medicine at the college of physicians and surgeons (Columbia) since 1893. He was a physician to the Presbyterian Hospital, consulting physician to St. Luke's Hospital, the Woman's Hospital, the Hospital for the Ruptured and Crippled and Babies' Hospital.

Dr. Charles F. Painter has been elected to the deanship of Tuft's College medical and dental schools to fill the vacancy caused by the retirement of Dr. Harold Williams. Dr. Painter was unanimously recommended by the faculty of the medical and dental schools. The new dean has served on the faculty of the medical school as professor of orthopedic surgery for seven years.

Dr. H. S. Beckford has left Belmont, and is now located in Laconia, N. H.

Dr. F. R. Brown, formerly of Winchester, N. H., after a post graduate course at the University of Vermont College of Medicine, has located at Laconia, N. H.

Dr. J. C. Kinney who was at Sharon, Vermont, for a long time, and recently at Tilton, N. H., has removed to Winchester, N. H.

Dr. David C. Berube has opened an office at Somersworth, N. H.

Dr. Geo. S. Foster of Manchester, N. H. has gone to Europe for study. He will be absent about three months.

All massage parlors and vapor bath rooms in Boston will be required by the board of health to present a recommendation from registered physicians known to officers of the board before their licenses will be renewed June 1, and all manicuring establishments will have to present recommendations from reputable Boston business men known to the board.

In the case of the massage and vapor bath rooms, the requirement of a recommendation from a physician is a new one this year.

A physician licensed in New York may recover for services rendered to a patient in New Jersey, although the physician may not be licensed to practice in that State, under a decision by Supreme Court Justice Giegerich yesterday. In the case before the court, Morris H. Hayman, a lawyer who had sustained severe losses in real estate transactions, shot himself in Newark on April 2, 1911. His physician, Dr. Louis J. Ladinski, was summoned from New York and attended him in a Newark hospital until he died.

The lawyer's estate was found to be insolvent, and the trustee in bankruptcy of the estate sued Dr. Ladinski for recovery on a mortgage for \$2,000. Dr. Ladinski responded with a counter claim for \$2,500 for his medical services. The trustees asked to have the counter claim thrown out on the ground that while a New York physician might practice in New Jersey without subjecting himself to punishment he couldn't get any pay.

The court decided that the New Jersey laws on that subject had left entire freedom to physicians of other States to render occasional professional services in New Jersey.

To create new positions in the Health Department.—In his annual report to the Legislature, Dr. J. J. O'Connell, health officer of the port of New York, recommended the creation of thirty-seven new positions in his department, carrying salaries that total \$35,000 a year. The report says that the expenditures for this department were \$50,000 less in 1912 than in 1911. Among the positions which the legislature has been asked to establish are a chief medical officer to have supervision over the station and hospitals at \$5,000 a year, an engineer to supervise improvements, at \$4,000 a year, a bacteriologist's

assistant at \$2,500, and another at \$1,500. Doctor O'Connell also recommends the establishment of a branch post office for his department, and the erection of a memorial tablet to commemorate the services and death "in the cause of civilization" of Dr. Edward Fiske Ashley, assistant bacteriologist, who died in 1911 of spinal meningitis, contracted while in the performance of duty.

The Fourth International Congress on School Hygiene, and the first to be held in America, at Buffalo, August 25-30, according to an announcement of the executive committee, will be by far the most elaborate effort yet made in this country toward getting the problem of school hygiene before the world. The first International Congress was held at Nuremburg in 1904, and the second at London in 1907, the third at Paris in 1910.

The objects of the Buffalo Congress are:

(1) To bring together men and women interested in the health of school children.

(2) To organize a program of papers and discussions covering the field of school hygiene.

(3) To assemble a school exhibit representing the best that is being done in school hygiene.

(4) To secure a commercial exhibit of practical and educational value to school people.

(5) To publish the proceedings of this Congress and distribute them to each member.

In addition there is a plan on foot to effect a permanent organization for the purpose of carrying out school hygiene reforms in all the individual communities in this country, if not all over the world.

One of the interesting features of the Congress will be the presence of delegates representing the community interest in school hygiene, including those appointed by mayors and governors, by women's clubs, by school boards, boards of health, by mother's congresses and charity organization societies and boards of trade. Their help is being solicited with a view of organizing the community in a campaign of school hygiene reform.

The program committee announces a program of two hundred and fifty papers and fifteen symposiums, taking up hygiene from the following points of view:

I. The hygiene of school buildings, grounds, material and upkeep.

II. The hygiene of school administration and schedule.

III. Medical, hygienic and sanitary supervision in schools.

The contributors to the program will make up a notable list of speakers, college presidents and professors; state, city and county commissioners of education; teachers and superintendents of public schools, medical college professors; state, county and city health officers; physicians in private practice, engineers and architects.

Special discussions are being arranged on the following subjects:

"School Feeding," arranged by the Committee on School Feeding of the American Home Economics Society; "Oral Hygiene," arranged by National Mouth Hygiene Association; "Sex Hygiene," arranged by the American Federation of Sex Hygiene; "Conservation of Vision in School Children," arranged by the Society for the Prevention of Blindness; "Health Supervision of University Students," arranged by Dr. Mazyck P. Ravenel, University of Wisconsin; "School Illumination," arranged by the Society of Illuminating Engineers; "Relation Between Physical Education and School Hygiene," arranged by the American Physical Education Association; "Tuberculosis Among School Children," arranged by the Society for the Prevention of Tuberculosis; "Physical Education and College Hygiene," arranged by the Society of Directors of Physical Education in Colleges; "The Binet-Simon Test," arranged by Professor Terman, Stanford University; "The Mentally Defective Child," arranged by Dr. Henry H. Goddard, Vineland, N. J.

Dr. Andrew Watson Sellards of the Johns Hopkins hospital, has gone to Turkey to assist in the American National Red Cross society's fight against cholera.

A vast medical college which would make Chicago the unquestioned center for the study of medical science is ready for launching by the trustees of the University of Chicago.

Indiana physicians are now required to make reports to the State Board of Health of all cases of diseases resulting from the social evil just the same as smallpox, diphtheria and other contagious diseases. Indiana is the 7th state to take this advanced step. This law is also enforced

in New York, Utah, New Jersey, Washington, California and Vermont.

The faculty of medicine of the University of Toronto, Canada, has received an endowment fund for medical research, the income of which will probably amount to \$25,000 a year.

A quintet of infants were born to Mr. and Mrs. Stiles Tinney, who reside about five miles above Conklingville, near Luzerne, N. Y., on April 23rd. The five are well and are expected to live. Beside the five just born, Mrs. Tinney has given birth to three pairs of twins, and triplets have been born to the family twice. They are all living.

Dr. Erwin F. Smith, plant pathologist in the Department of Agriculture, enjoys the unusual distinction of declining a \$10,000 position with the Rockefeller Institution for Medical Research to retain one at \$4,000 a year with the Government. Dr. Smith attracted attention for his investigations in the comparative study of plant diseases in their relation to man and beast.

The Berlin correspondent of the Philadelphia *Public Ledger* has obtained a copy of the official report of a postmortem on a Friedmann patient, John McClusky, of Oklahoma, who died in Berlin on February 14th. McClusky, who was 32 years old, fell dead in the street three weeks after he had received the injection treatment from Dr. Friedmann. He was suffering from markedly advanced pulmonary tuberculosis with large cavities in his lungs, when he submitted himself to the treatment. The postmortem took place at the Royal Hospital in Berlin, under the supervision of Professor Westenhofer. The report sets forth that McClusky received an injection in the left gluteal muscle. His lungs were shown to contain cavities as large as hens' eggs. Death was caused by the rupture of a pea-sized aneurism of a branch of the pulmonary artery lying on the side of one of the lung cavities. Microscopic examination showed that there was a pronounced tendency to healing in the lungs, but very recent acute miliary tuberculosis of the kidneys, liver and spleen and a marked catarrhal condition of the left Rosenmüller gland. In the muscle tissue at the point of injection there was young connective tissue with many fibroblasts, lymphocytes and leucocytes. There also was destruction of muscle with a tendency to regenerate. In one place there was

a typical tubercle with necrosis of the giant cells, epithelioid cells and lymphocytes.

A fifth year of medical study will be required in Pennsylvania after 1914. The additional year will, however, amount practically to compulsory interne service of which 90 per cent. of graduates already avail themselves.

Very dilute aqueous solutions of tincture ferric chloride are effective when an astringent effect is desired in the pharynx. A mild spray or gargle the patient will use regularly; an unpleasant one he will discard after a few trials.

Twenty-nine boys from St. Francis Industrial school, at Eddington, Pa., were operated upon for appendicitis recently within a period of ten days, sixteen in one day. The overeating of cheese is said to have been the cause of the epidemic.

The city of Newton has provided for a dental clinic for school children too poor to pay the regular dentist's fees. Equipment costing \$400 has been installed in two school rooms and here Monday and Thursday afternoons and Saturdays when there is no school, twenty dentists have promised to do dental work free.

Rockefeller Institution for Medical Research has just received \$200,000 from the bequest of Henry Rutherford, Grand Isle, Vt., for cancer study.

The discovery of a serum which may revolutionize the whole science of serum therapy is announced. The discoverer is a German, Frederick Mohnarto, who worked with Dr. Koch in Africa on the sleeping sickness. Dr. Mohnarto quietly advanced the claim that he had discovered a serum which was harmless in application and of such a character that it would, assuming that the patient had any fair amount of vitality left, effectually cure any disease which was due to the presence of a micro-organism in the blood. Previous tests were for tuberculosis, but since their commencement the serum is being tried in cases of malaria, leprosy, mucous colitis, pernicious anaemia and other disorders of the blood. The treatment is said to have been successful.

The Phipps Institute, a million-dollar gift by Henry Phipps to the University of Pennsylvania for the study and prevention of tuberculosis

among the poor, was dedicated May 10th. The institution, one of the best equipped in the world for its special work, is situated in one of the slum sections of the city of Philadelphia. Medical men and sociologists from all parts of the United States, scientists and philanthropists attended the dedicatory exercises.

WANTED—A GRADUATE NURSE AS HOSPITAL SUPERINTENDENT. AMERICAN HOSPITAL FOR WOMEN AND CHILDREN, MADURA, SOUTH INDIA—STATISTICS FOR YEAR 1911.

Number of beds, 50; patients (including out patients), 12,364; treatments, 29,205; operations, 769; maternity cases, 154; outstation visits, 422; staff: 2 American physicians, 1 Indian sub-assistant surgeon, 3 Indian compounders, 8-10 Indian nurses, 1 Indian Bible woman. Among the patients were 41 Europeans and Eurasians, 3,820 Indian Christians, 7,446 Hindus (of all castes) and 1,057 Mohammedans. Nearest hospital for women is 70 miles distant. Patients sometimes come 100 miles to be treated. The doctor has visited patients 70 miles from the hospital. An important part of the work is the care of missionary families in the Madura Mission. Support: Salary is \$500 and room in mission building. Board is about \$13 a month. Extra allowances are made for language teacher and vacation expenses. A missionary who applies for permanent appointment (terms of service seven years with one year of furlough) receives an outfit allowance of \$250 in addition to traveling expenses.

Further information: Christian nurses who desire to know more of this and similar openings in other lands are asked to write to Mr. Wilbert B. Smith, 600 Lexington Avenue, New York City.

THE NEED OF A MEDICAL MISSIONARY AT BEIRA, PORTUGUESE EAST AFRICA.

The appeal is issued by the American Board of Commissioners for Foreign Missions, Boston, Mass. Qualifications and support: A Boston gentleman offers to pay the salaries of these missionaries whenever they are found. This appeal is particularly for a medical man, thoroughly qualified professionally, in physique, in missionary devotion and in ability to handle his fellow men tactfully. The board expects the doctor to be a college man and a graduate of a

high grade medical school, and to have had considerable practice. The board will send the doctor to London for a special course in tropical medicine. It will be useless for indifferently prepared doctors to apply. The board never lowers its standards in the matter of qualifications. The doctor need not be a Congregationalist but he must be earnestly Christian.

Correspondence:—Physicians who wish to investigate this and other opportunities now open for Christian medical service in India, China, Turkey, Korea, and Persia should write to Mr. Wilbert B. Smith, 600 Lexington Avenue, New York City.

BOOK REVIEWS.

TUBERCULIN IN DIAGNOSIS AND TREATMENT—By Francis Marion Pottenger, A. M., M. D., LL. D., Medical Director of the Pottenger Sanatorium for Diseases of the Lungs and Throat, Monrovia, California. 243 pages, royal octavo, 35 illustrations, including one color plate. Price, \$3.00.

This volume is the most complete and up-to-date work on tuberculin that has yet appeared. Beginning with the importance of tuberculin tests in the early diagnosis of tuberculosis, the author discusses in detail "Subcutaneous Tuberculin Test," "Cutaneous Tuberculin Test," "Tuberculin in Treatment of Tuberculosis," "Hypersensitiveness," "Certain Conditions which have made the Adoption of Tuberculosis as a Diagnostic and Therapeutic Measure Difficult," "Evidences of the Therapeutic Value of Tuberculin," "Fever in the Relationship to Tuberculosis," "Temperature Curve in Tuberculosis," "Technic of Administering Tuberculin," and an Appendix, in which is given for the first time in English Koch's announcement of the discovery of tuberculin.

Dr. Pottenger is qualified to speak on this subject. Two thousand cases of tuberculosis coming under his personal care in sanatorium practice furnishes the basis for this work. Careful, painstaking effort is everywhere noticeable in this production. The chapters on Importance of the Tuberculin Test in the Early Diagnosis of Tuberculosis is especially to be commended, as well as that on Technique of Administering Tuberculin.

There is no doubt but that many failures attending the use of tuberculin in the past have

been due to a lack of knowledge of its proper administration. This defect can be overcome by a careful perusal of this volume and to follow its technique.

THE NARCOTIC DRUG.—Diseases and Allied Ailments, pathology, pathogenesis and treatment. By Geo. E. Pettey, M. D., Memphis, Tenn. Illustrated. F. A. Davis Company, Philadelphia, Penn.

In this monograph Drug Habitués are treated as victims of disease, a toxemia of drug, auto, and intestinal origin. On this basis the essential of its treatment is elimination. The various methods of treatment are discussed in a sane reasonable manner.

VACCINE AND SERUM THERAPY.—Including also a study of infections, theories of immunity, specific diagnosis and chemo-therapy. By Edwin Henry Schever, B. S., M. D., D. P. H., formerly assistant to Thomas Wilson Sanatorium for children, Mt. Wilson, Md.; assistant Rockefeller Institute for Medical Research, New York City, and at one time member of the faculty of the University of Missouri, of the University of Kansas, and the department of Preventive Medicine and Hygiene of Harvard University. 2nd Revised Edition. C. V. Mosby Co., St. Louis, Mo.

This book discusses in a lucid way the subjects of infection and immunity with the various theories which have been advanced to explain the phenomena, specific therapy, chemo-therapy and specific diagnosis. The technique is taken up very carefully and the text is illuminated with numerous plates.

SOLIDIFIED CARBON DIOXIDE.—In the successful treatment of cutaneous neoplasms and other skin diseases with special reference to angioma, epithelioma and lupus erythematosus, fully illustrated. By Ralph Bernstein, M. D., Philadelphia, Clinical Instructor in Skin Diseases, Hahnemann Medical College, Philadelphia, Pa., consulting dermatologist to the woman's Southern Homeopathic Hospital, etc. Frank S. Betz, Hammond, Ind.

The use of liquid carbon dioxide in the treatment of many skin lesions was first devised as a substitute for liquid air which it has now entirely supplanted. It is a therapeutic agent of great value and the simplicity of its preparation should render its use more general than it is.

This book makes this all very clear and will prove interesting, instructive and valuable to any practitioner.

NERVOUS AND MENTAL DISEASES.—For Students and Practitioners. By Charles S. Potts, M. D., Professor of Neurology in the Medico-Chirurgical College of Philadelphia. New (third) edition, enlarged and thoroughly revised. In one 12mo volume of 610 pages, with 141 engravings and 6 full-page plates. Price, cloth, \$2.75 net. Lea & Febiger, Publishers, Philadelphia and New York, 1913.

In this new revision the chapter on general symptomatology and methods of examination has been amplified. A description of tic embodying the present-day view of that disorder, and short descriptions of myotonia atrophica, progressive lenticular degeneration and dysbasia, lordosis deformans have been added. The importance of the examination of the cerebro-spinal fluid and determination of the existence of the Wassermann reaction in the diagnosis of certain diseases of the nervous system has been realized and the latest views incorporated. In brief, the work includes the most recent advances. This book considers the intricate and difficult subject of Diseases of the Nervous System in a short, clear, concise manner which is likely to be of the greatest value to the general practitioner who must inevitably be the first to see these cases and refer them to the specialist.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

ANTIVIVISECTION LEGISLATION.

W. B. CANNON, Boston (*Journal A. M. A.*, May 17), gives an account of antivivisection legislation in Great Britain and of the attempts to secure the same in this country and the methods used to combat it. He shows the impracticability of the measures demanded by the zoophiles and the lack of need of such restrictive legislation. The less drastic measures that are sought to be secured are wanted only as stepping stones to still stricter limitations or abolition of animal experiments altogether. The fundamental objection to all these measures is, Welch says, that the enactment of such statutes would take the control of a matter of the highest importance to human welfare entirely out of the hands of competent experts, and non-experts would be given powers that might prove disastrous to the future of scientific medicine, which is a monstrously wrong principle to embody in legislation.

VERTIGO.

A. C. REED, Port Penn, Del. (*Journal A. M. A.*, May 17), says that there are two conditions causing vertigo; one the integrity of the end-organs and the other paralysis of certain ocular muscles. While it is only a symptom its diagnostic significance is important. The indications in any case are to remove the underlying or essential cause and, when this is not apparent or the vertigo is reflex in origin, to use measures for the relief of the symptom. To judge as to the essential cause one must keep in mind a clear classification of the conditions that may produce it at different ages of the patient. In the child transient vertigo is often due to mechanical causes, but most commonly it is due to a middle-ear infection following the acute infectious fevers. It may also be due to anemia or malnutrition, and occasionally one must consider the possibility of brain abscess or cerebellar tumor. In early adult or middle life vertigo can most often be traced to vascular or reflex source, such as some disorder of the digestive or genital organs, or to the arterial or myocardial changes. Ocular disturbances causing vertigo are also fairly frequent at these ages, and, of course, mechanical or aural vertiges may occur. With increasing age the vascular and certain types of reflex vertigo become more common. The vertiges from reflex irritation are taken altogether, most commonly due to irritation in the digestive tract or the pelvis. In treating these a sharp purgative may be given, followed by stimulants and sedatives and such medicines as may affect favorably the trouble in the exciting organs. Neurotic vertiges are somewhat similar to the reflex ones. They are common in neurasthenia and in certain degrees of nervous and emotional stress. Barany says that the vertigo of neurasthenia is characterized by irregular nystagmus, differing from the quick return of labyrinthine vertigo. Palliative treatment is secondary to thorough and persistent attack on the fundamental neurotic condition. Vertigo from purely vascular conditions or derangements, such as congestion, arterial sclerosis, anemia and other disturbances of the cerebral circulation, should be treated according to the vascular underlying condition. Toxic vertigo, as from alcohol or a nephritis, calls for a like management. Auditory vertigo may signify organic disease, and is due to disturbance of the function of the space sense of the eighth nerve. This may be due to slight causes, such as the sudden occlusion of the eustachian tube, deranging the pressure in the tympanic cavity. Of the two labyrinthine vertigo from organic disease is more serious, and Reed quotes somewhat at length from Carrison as to the symptoms and mechanism of these cases. Operative interference is seldom required in purely vestibular vertigo, but rest and quiet in bed are the prime needs. The second or paralytic type of vestibular vertigo following vestibular irritation, can be treated by progressive graded movements to reeducate the spatial sense of orientation. Meniere's disease is a term used to cover various forms of auditory vertigo with tinnitus and is always due to labyrinthine disease. Charcot's plan of giving increasing doses of quinin to cinchonism is recommended in this type and salicylate of soda is said to be a good substitute for quinin in such cases. Vertigo from the disturbance of the ocular arc is less frequent than reflex or aural vertiges, and correction of the refractive error gives relief. Mechanical vertiges,

like sea-sickness, car-sickness, etc., call for no special method of treatment. To relieve the symptom when the cause is not apparent, Reed recommends a purgative, rest, some volatile stimulant, and for internal administration sodium bromide 20 grains, three times a day, is probably the most satisfactory. A mustard plaster on the back of the neck, keeping the extremities warm and contra-irritation with weak mustard bath or hot water bags outside of the blanket and occasionally a slight cautery of the mastoid region may be useful.

LEUKOCYTE COUNT.

W. M. WATTERS, Boston (*Journal A. M. A.*, May 17), publishes charts, a modification of those of Gibson which have a defect, he says, of making the neutrophil count percentage too great (over one hundred) in case the leukocyte count goes above thirty-five thousand. He has therefore taken out the extreme limit of the leukocyte count and of the differential count and divided the intervening spaces proportionately. For a count of ten thousand a neutrophil percentage of seventy-five is admittedly about normal in adults and no count less than that is spoken of as a leukocytosis. Equal spaces are accordingly given to each and spaces are divided equally in the chart. The leukocyte count is marked on the left and the neutrophil percentage on the right and the two points united by a straight line. As with Gibson's original chart, a level or descending line warrants decreasing anxiety while an ascending one is a danger signal. If one wishes to make multiple counts on different days another chart is then used in which the leukocyte count is shown by a solid line and the neutrophil percentage by a broken one, both in the same vertical plane. When the solid line is above the broken one or level with it the indications are favorable; if below, the reverse. A still further modification of this chart is its transfer to a temperature chart so as to tabulate the daily variations together. He has found the use of these charts very satisfactory both in diagnosis and prognosis.

LARYNGEAL TUBERCULOSIS.

R. LEVY, Denver, (*Journal A. M. A.*, May 17), thinks that laryngeal tuberculosis is much more frequent than many physicians recognize but he does not think it is becoming more common. The higher percentage in late statistics must be attributed to early diagnosis and careful examination and he believes that the increase is largely in the early cases and that late stage cases are rarer than formerly. Tuberculosis is not only earlier recognized but it is better treated and more often cured or arrested than formerly, and late complications are less frequent. Among the earliest symptoms of laryngeal involvement we find slight intermittent hoarseness as a local expression of a general anemia, often unilateral and on the same side as an existing pulmonary tuberculosis. In such cases a sensitiveness and irritability of the pharynx is also a suggestive early symptom. Pain as a symptom has an uncertain significance. It is not absolutely distinctive of tuberculosis but an important distinctive point is found in

its increase in the act of swallowing between meals or at the beginning of a meal. It is unquestionably a valuable symptom but not pathognomonic. The tuberculin test extolled by Von Ruck is not to be absolutely depended on. The sputum-findings do not determine the locality of the disease unless bacteriologic examination of the mucus of the pharynx itself reveals them. A common error is to diagnose laryngeal paralysis from constant or intermittent hoarseness in pulmonary involvement. This is most often due to laryngitis sicca. Some aphonia following hemorrhage, while suggestive, may be due to other causes, but if it occurs before the pulmonary lesion has been detected it has some significance. It is also a mistake to infer laryngeal involvement from sudden hoarseness and aggravation of symptoms generally. This may be due to new foci in the lungs and can be ascribed to the larynx only when shown by objective examination. The prognosis has much improved of late years but too great an optimism is not advised. If we were to study only the prognosis of early cases it would not be dreaded, but late cases give little hope. Levy thinks that 31 per cent. most nearly represents a reasonable estimate. Statistics show the disease most fatal in the female which may be ascribed to the occurrence of pregnancy—a dangerous complication in any case of tuberculosis. As regards the effect on the voice a large proportion of voices can be restored to usefulness even in cases where extensive destruction of one vocal band has occurred. The least hopeful cases are those with extensive fibroid hypertrophy of the arytenoids and interarytenoid space associated with perichondritis invading the crico-arytenoid articulation. As regards treatment the consensus of modern opinion supports the following: "1. Treatment by means of rest to vocal organs in conjunction with rest and general hygienic measures. 2. Local measures, modification of surgical procedures. Among these the use of the galvanocautery seems to have at the present time the most advocates. 3. The relief of pain by injection or section of the superior laryngeal nerve. 4. The use of tuberculin." Too much emphasis cannot be laid, Levy says, on the importance of complete vocal rest and he also insists on securing the proper nasal respiration. Each of the other recommendations enumerated has its advantages stated in some detail. As regards the more radical measures, such as extirpation of the larynx, they are condemned by Levy as long as simple measures have been found so successful.

VARIOLA AND VACCINIA.

P. M. ASHBURN, Washington, D. C. (*Journal A. M. A.*, April 19), offers the following explanation of the relationship of variola and vaccinia. The basic facts, that small-pox contagion or inoculation produces a highly contagious and largely fatal disease, but that after being passed through cattle and monkeys for a few generations and then passed back to man it causes vaccinia, a localized, non-contagious disease with no mortality of itself and never regains the former virulence, are explained by him as follows: "1. The germ of small-pox by passage through certain lower animals loses (acquires) certain properties and it transmits its altered condition to its offspring forever, a more striking instance of hereditary transmission of acquired characteristics than has ever before (so far

as I know) been cited. 2. *Small-pox is due to a dual and divisible virus, one part of which causes vaccinia and the specific small-pox eruption, the other part being necessary for the production of the contagious, generalized, mortal disease with a distinct precursive stage and initial rashes.* The latter is the favored explanation, both because it seems more reasonable and because it is supported by numerous well-established facts." As evidence favoring this explanation he cites examples of other viruses which seem to show a similar duality and animal poxes and variolation of animals. Also the clinical observations as follows: "A. The three forms of small-pox not showing a pock stage, or only an incomplete one, purpura variolosa, varioloid and variola sine exanthemate, occur in vaccinated persons as often as, or more often than, in unvaccinated. B. *Vaccinia therefore protects against the pox stage of small-pox rather than, or to a greater degree than, against the whole disease.* C. Twenty-two per cent. of 2,601 persons who had had variola or been variolated were still susceptible to vaccinia, though immune to small-pox. His views will be given in fuller detail in the *Philippine Journal of Science* and in the *Military Surgeon*. In the meantime he hopes that those who have the opportunity with small-pox cases will test them further by experimental work.

TRAUMATIC SUBDELTOID BURSITIS.

J. M. FLINT, New Haven, Conn. (*Journal A. M. A.*, April 19), discusses the traumatic bursitis of the shoulder joint which, he says, has been heretofore treated in its acute stage by immobilizing the joint to prevent further traumatism. The method of treatment which he suggests and of which he reports the results in his experience is aspiration of the joint. This method was first used by him in a case of metastatic bursitis in empyema from acute osteomyelitis of the femur. Aspiration of the bursa yielded pus and the diagnosis was confirmed by operation. Two cases of subdeltoid bursitis following injury are reported in which aspiration afforded complete and prompt relief. In the promptness of its results the effect of the aspiration can be compared only to that in a ganglion or weeping sinew. There may have been more severe cases, Flint says, in which frequently more repeated aspiration would be required and it is particularly desirable to know how the method would apply to chronic cases. It may prove that radical excision of the bursa according to the method of Baer or the treatment of Codman would be best in these cases. "The method of aspiration which we employed is shown in the accompanying diagram. A Luer syringe is partly filled with about 1 c.c. of sterile cocain or novocain solution. The latter is injected into the skin and ahead of the needle as it passes through the deltoid. The needle is pointed roughly parallel to the clavicle and directed toward the bursa lying just over the bicipital groove. The point of entrance is about 2 cm. below the level of the acromion process. As the point of the maximum tenderness lies directly over the bursa, this will prove perhaps the best guide for the needle, for it is just at this point that fluid was obtained in my cases." After the aspiration, it may be well to fix the joint in a velpeau bandage for a few days. This was not done in the

two cases reported as Flint wished to observe the effects of the aspiration directly.

TUBAL REIMPLANTATION.

The various methods of sterilization of the female and their defects are reviewed by G. DE TARNOWSKY, Chicago (*Journal A. M. A.*, April 19). He describes an operation devised and used by himself which he calls tubal reimplantation. He considers it indicated in selected pathologic conditions; such as tuberculosis, nephritis, syphilis and certain mental conditions. It is essentially non-mutilating and conservative. It can be performed only on normal tubes, but minor pelvic lesions can be corrected at the same time. It can be performed both abdominally and by the vaginal route in multiparae, and by the latter route much better in virgins. The steps of the operation are as follows: "1. Make mediolateral incision 4 inches long. Open peritoneal cavity in median line after retracting rectus muscle and opening posterior sheath with scissors. 2. Grasp fundus uteri with vulsellum forceps and draw it up through the incision. 3. Amputate tubes on either side one-fourth inch from the uterine cornua. With a fine rat-toothed forceps or a probe, invaginate the distal half of each stump and close the lumen with two catgut sutures. This produces a serous adhesion which will effectively close the canals. 4. On the posterior uterine wall, make two parallel vertical incisions one inch long and one-half inch apart. These incisions should not be over one-fourth or one-fifth inch deep. With a curved forceps, burrow between these incisions, creating a canal of sufficient size to contain the two tubes. 5. With the same curved forceps remaining in the new canal, grasp the opposite tube and draw it through the canal so that it emerges on the opposite side. Reintroduce the forceps from the opposite side and repeat the same procedure with the remaining tube. In the new canal the tubes should be parallel to each other, one lying above the other, the cut extremity of each tube emerging on the opposite side of the new canal. 6. Make a small cuff by everting the tubal mucosa (it is sometimes necessary to make two small incisions before being able to evert satisfactorily) and secure cuffs to the margins of the new canal by fine catgut stitches which also control any uterine oozing which may be present. Test the patency of both tubes by means of a fine probe. 7. Close the abdominal incision." This operation, he thinks, preserves the function of the ciliated epithelium, the tube remaining an open canal from end to end and draining normally if we believe in Menge's wave. He believes that, while he cannot offer proof, the normal conditions can be restored after this operation affording the possibility of future pregnancy if desired, and he was led to evolve the above technic by the request of a patient for a procedure permitting restoration of fecundity, the other methods of tubal sterilization lacking this. He has performed the operation four times within the last eighteen months and he expects to reconstruct the tubes in one of the patients at a future time. Special emphasis is laid on two points: "first, the invagination of the tubal stump, thus obtaining serous coaptation; second, the eversion of the cut tube as it emerges from the tunnel on the posterior uterine wall, obliterating raw surfaces which would invite the formation of adhesions. The

ultimate success of the operation depends, in a large measure, on the careful observance of these two points."

PARANOID INSANITY.

N. S. YAWGER, Philadelphia (*Journal A. M. A.*, December 21), describes a case of megalomania with jacksonian convulsions, clinically resembling a somewhat aberrant case of paresis, which, however, the author rules out on account of the strictly localized meningeal and cortical involvement. The lesions were confined to the parietal region, but an exact convolitional limitation is not given. The history also was very defective. There was no history of syphilis, but there was enlargement of the inguinal glands and unequal pupils. The microscopic appearances are described and the syphilitic origin is strongly suggested. No Wassermann test was made.

HEMIPLEGIA WITH CONTRALATERAL OPTIC ATROPHY.

W. B. CADWALADER, Philadelphia (*Journal A. M. A.*, December 21), gives the history of cases occurring in the service of C. K. Mills and J. K. Mitchell at the University and Orthopedic hospitals, in which the coincidence of optic atrophy with contralateral hemiplegia was observed. There was in one right motor aphasia and spastic paralysis of right arm and leg, while in the left eye there was evident occlusion of the central artery of the retina. Previous cases published by Gowers, Jackson and Batten and Guthrie have shown that an embolism may be carried through the internal carotid into the middle cerebral artery and at the same time send off a portion into the ophthalmic artery and even into the central artery of the retina, causing sudden blindness and atrophy. In both the cases reported the loss of vision was not immediate and in one of them there was probably a localized endarteritis preceding the sudden attack of paralysis.

ADULT JOINT TUBERCULOSIS.

After mentioning the chaotic condition as regards surgical practice in adult tuberculous joint disease, L. W. ELY, Denver (*Journal A. M. A.*, February 24), lays down three rules which he submits for adoption in the surgery of the affection. They are based not only on clinical experience, but also on laboratory examination of his own and others' results. The first rule is that the treatment in adult tuberculous joints should almost invariably be radical. Painless and useful function of these joints is a dream, except in the mildest cases, and treatment with this aim should not be continued over six months, if undertaken at all. If the bone is much damaged it is not worth while to try it. In the spine, however, there is no field for radical treatment. While this rule may be challenged, he says he will not accept the reports of brilliant success from conservative treatment. Such cases frequently relapse. The second rule is that we should aim to deprive the joint of function, and the simplest and best way to accomplish this is by resection. If the synovial tissues and the red marrow of the joint are removed

there is no field for the bacillus to work, and the object of resection is not to remove all diseased tissue but to deprive the bacillus of its points of attack. There are two exceptions to this rule: first, the joints of the tarsus and carpus. Here the only hope is in a sufficiently wide resection or in amputation. Partial operations are worse than useless. The other exception is that, if the patient's vitality is very low, amputation is probably better than resection. The third rule is that in all operations on tuberculous joints secondary infection must be avoided at all points. Scraping and packing tuberculous joints and abscesses should never be practiced, and if drains are used they should be removed soon. The reason for this is that tissues, at first resistant, may become vulnerable to secondary infection. The hypothesis of the pathogenesis of joint tuberculosis which he offers is as follows: "The accepted relation of the lymphocyte (or similar cell) to the tubercle bacillus is at least not an invariable one. Let us assume that the lymphoid cell, instead of being the antagonist of the tubercle bacillus, bears the same relation to it that the red blood-cell bears to the plasmodium of malaria, or the polymorphonuclear bears to the gonococcus. In other words, the lymphoid cell is not the antagonist of the tubercle bacillus, but its prey." If secondary infection has occurred, vigorous efforts should be made to overcome it by cupping, bismuth paste injections, etc., before resorting to operation.

POSTOPERATIVE EXERCISES.

E. H. POOL, New York (*Journal A. M. A.*, April 19), advocates the use of systematized bodily exercises in postoperative cases when the condition of the patient and the character of the operation permit. He says that he can speak from personal experience as to their value, having employed them after an interval operation for appendicitis on himself. He gives a list of exercises from which a choice can be made, including various flexions and rotations of the extremities and flexions and movements of the head and neck, mentioning certain cautions as regards flexions of the knee after celiotomy. These should be omitted in cases of right inguinal hernia and appendectomy as far as the right leg is concerned. They should never be continued beyond the point of mild fatigue and they are most suitable for routine cases, such as interval appendectomy, simple herniotomy and many gynecologic operations. They are not a substitute for massage or passive movements when these are indicated but may usefully supplement them. He answers some objections that may be offered and asserts that they afford almost all the advantages of a shortened stay in bed which might interfere with proper healing of the wound. As regards thrombosis and embolism he agrees with Kleinschmidt and others that they are prophylactic of such an occurrence and holds that there are no valid arguments against the use of such exercises provided they are properly systematized and selected. Their trial in a number of cases seems to him to support the theory, that, as a result of their use, the general circulation is improved, the functions of the body are performed in a more normal manner, the patients feel better, muscular weakness and atrophy are diminished, and, after getting up, exertion is less fatiguing and return to

normal is more rapid. It is necessary that they should be systematized and supervision is essential in every case.

LUMBAR-PUNCTURE NEEDLE.

J. M. WOLFSOHN, San Francisco (*Journal A. M. A.*, April 19), after noticing the usual apparatus employed, here and in Germany, which he thinks does not meet all the needs, describes an instrument devised by himself which he thinks better meets the indications. It permits the withdrawal of the fluid without loss, accurate menometer readings, the introduction of serum, aseptics or other fluids into the spinal canal and the carrying out of all the principles of aseptics with exactitude. Besides these advantages, he says that it is so constructed as to enable the operator to tell the instant the pia-arachnoid space is reached, thus giving a minimum of injury to the surrounding tissues. The description is best understood with the illustration for which the reader is referred to the original.

HOSPITAL CLINICAL RECORDS.

J. S. BROTHERHOOD, Saratoga Springs, New York (*Journal A. M. A.*, April 19), describes a set of hospital record blanks, devised by himself after a study of the records of about thirty of the leading hospitals of the country. These are illustrated in his paper with full instructions as to their use. He recommends them to be of a standard size, such as is used for business letters, as these are best adapted for filing, etc. Blank is devoted to the vital statistics of the patient, the name and address of physicians, former hospital history and the diagnosis, with plenty of space for remarks. The ruling provides for hospital and service numbers. The second blank consists of a plain ruled paper with side-ruled margin for brief notes or summaries, and the major portion is devoted to a carefully taken history. The third portion of the clinical record consists of laboratory and special examination charts, while the fourth, called the temperature chart, gives the daily record of the patient's condition and is made out by the nurse, according to the directions given. For keeping and filing records, filing cases may suffice in small hospitals, but in large hospitals they should be bound and a cross-index card system employed.

CHINA SUPPRESSING THE OPIUM HABIT.

The establishment of the Chinese Republic has led many occidentals to change their opinion as to the lethargy and inertia which they supposed characteristic of the inhabitants of the celestial empire. There is another story of accomplishment in China, however, during the past five years, which makes it even clearer than the recent revolution that there are undreamed of springs of energy in the Chinese people. About

five years ago the Chinese government decided that opium smoking, which had become the national vice of China, even to a greater extent than alcoholism is of the Western nations, must stop, and that within ten years. It is scarcely to be wondered at that when this government edict was issued it was greeted with smiles everywhere; five years have passed and now the world knows that success in the great national crusade seems almost assured.

The method that China is pursuing is interesting. Five years ago China and Great Britain made what is known as "the ten years agreement," by which the British government undertook to reduce the amount of opium sold in Calcutta on government account for export to China by 10 per cent. every year until the traffic had ceased. On her part China agreed to diminish her own production in a corresponding way. Measures were to be taken to reduce the growth of opium in China 10 per cent. each year until at the end of ten years no more would be raised. With supplies from India cut off and the home crop reduced and eventually suppressed altogether, the opium habit must necessarily disappear. The results accomplished thus far are promising. Travelers report that it is no longer common to see men smoking opium at their own doors. Even two years after the edict, those who smoked did so in secret. The edict is being enforced. The agricultural map of China shows after five years that there has been an actual reduction of 50 per cent. in the production of opium. There has been a great reduction in its use. All the world will watch with interest this awakening of China, and the oriental method of solving a great social question, says *The Journal of the American Medical Association*. In the West we have our social problems of a similar nature and China's example may prove illuminating and helpful.

THE PREVALENCE OF THE MORPHIN AND COCAIN HABITS.

Examination of the laws which control the sale of opium and cocain in the several states shows that there is a most extraordinary lack of uniformity. In many states antinarcotic laws are so comprehensive that were an attempt made to enforce the law literally it would result in

the fine or imprisonment of practically all the retail druggists. On the other hand, there are some states in which the exceptions and provisos to the law are so numerous as practically to nullify all efforts to control the traffic in narcotic drugs.

Although in most of the states there is some legislation which aims to abolish the evil, it is all of comparatively recent date, and has not kept pace with the increase in drug addiction. Lack of federal control resulting in various conflicting state laws, or more properly speaking in giving rise to a diversity of laws that stringency in one state can be overcome by ordering by mail from another state where the laws are less stringent, is undoubtedly the chief reason why our country compares so unfavorably with European countries in respect to the prevalence of morphin addiction.

Since 1860, when the various forms of opium were separately enumerated in the tariff schedule, there has been an increase of 351 per cent. in the importation and consumption of all forms of opium, as against an increase of 133 per cent. in the population. In the United States during the last ten years there has been an annual importation and consumption of opium of over 400,000 pounds. Austria-Hungary, with a population of a little less than half that of ours, consumes annually less than one-hundredth this amount of opium. Germany with sixty million inhabitants consumes only about 17,000 pounds annually, while in Italy with thirty-three millions there is an annual consumption of only 6,000 pounds. The appalling discrepancy consists in the fact that the most reliable authorities are agreed that one-eighth the amount of opium imported into the United States would amply suffice for the legitimate medical needs of our people. This country manufactures into morphin fully 300,000 pounds of the annual importation, and it is estimated that 80 per cent. of the morphin thus made is used by victims of the habit.

When we consider cocain, the situation is no less alarming. Köller first introduced this drug to the medical profession in 1884. Thirteen years later was enacted the first legislation in the United States which strove to prevent the indiscriminate sale of the drug. In 1897 Illinois passed a law which made it unlawful to give or sell any cocain or preparation containing cocain in any form, except on prescription of a physician or dentist. The impracticability of all the legislation since that time is evidenced by the fact

that although cocain is a drug which is utterly useless except in the hands of the physician or dentist, and should never be prescribed for continuous use under any circumstances even by them, there has nevertheless been such a steady increase in its use that it is now reliably estimated that illegitimate use alone exceeds 150,000 ounces every year.

A consideration of the evils attendant on the use of morphin and cocain alone, says *The Journal of the American Medical Association*, should tend to convince the most ardent advocate of state's rights that legislation regulating the sale of all dangerous habit-forming narcotics should be national in scope and absolutely uniform throughout the country. In matters which affect the health of the nation at large the laws should be made by Congress, and their execution should be in the hands of federal rather than state authorities.

FRIEDMANN'S CURE—A DISGRACEFUL PIECE OF COMMERCIALISM.

Last November Friedrich Franz Friedmann read a paper before the Berlin Medical Society announcing that he had succeeded in producing a preparation of tubercle bacilli by which he claimed to be able to produce curative effects in the most advanced cases of tuberculosis, and to immunize children against the disease. Immediately there appeared in the newspapers of this country, and to less extent in those abroad, sensational accounts of this new treatment. It was lauded as a discovery that was to banish tuberculosis from the world. This was the beginning of a most remarkable and disgraceful newspaper exploitation. This has been kept up until the present time. As one looks back one is forced to the conclusion, says *The Journal of the American Medical Association*, that, from the beginning, it was a premeditated, well-arranged scheme of free advertising. The press-agents of this obscure bacteriologist certainly have done their work well.

Until it was announced that Friedmann was coming to this country, the medical profession was generous in ascribing to newspaper enterprise the advertising he was receiving; but as soon as it was announced that he was coming

for the million dollars offered by a wealthy philanthropist, many became suspicious. He was a registered physician in Germany, with the right to use his remedy there. The German government fully secures to a discoverer by patent a monopoly of the financial benefits to be derived from his discovery. Germany certainly has as many sufferers from tuberculosis, in proportion to its population, as has the United States. If Freidmann has a remedy such as he claims, he could have secured in his own country financial returns which would have made him rich. In spite of this, he left his own land and came here; and his actions since he has been in this country have been such as to destroy any confidence which thinking physicians may have had in the man.

Now it is announced that a deal has been consummated through which he is to get a large sum of money immediately, with great prospects for the future. It is safe, therefore, to conclude that he has realized the ideal he had in mind when he landed on our golden shores. Greeted with courteous open-mindedness at first, he seems to have been received with open arms by shrewd and not too scrupulous promoters who were eagerly watching for a chance to reap a harvest in partnership with him. Unless there is some totally unforeseen governmental action, or unless some well nigh impossible wave of skepticism sweeps over the land, it looks as though the dollars to be wrenched from the wasted hands of the tuberculous would make a harvest which would exceed the reappings of all previous efforts to bunco the sick.

The American medical profession has listened to the claims of Friedmann with an open mind. It has waited patiently for him to prove his claims and to show his real intentions. To wait longer is now unnecessary. The most pressing duty now before physicians is to lay the facts before the public through the agency by which Friedmann has so shrewdly secured the free advertising, from which he is preparing to reap his golden harvest. A united movement to warn the people on this important question will meet with a cordial response from this same agency—the American press.

We can disregard the fact that the remedy is a secret one; we can ignore the dishonorable conduct of Friedmann as a physician; we can even forget the possible danger that lies in his treatment; we can let all this pass. But one fact stands out clearly and should be emphasized:

Friedmann has presented no proof, no evidence, that he has found a cure for consumption.

FRIEDMANN EVADING THE LAW.

Dr. Friedmann's course, since he landed on our shores, has been one of constant evasion. His claims for his treatment rest solely on his own statements. He has not qualified as a physician in New York or Rhode Island. He has failed even to answer the letters of the officers of the Public Health Service. He has persistently refused to publish any proof of the claims made for his preparation. Now comes the most startling development of all. According to newspaper reports, branch "institutes" are to be established by Dr. Friedmann and his promoters. Each "institute" will make its own serum or culture, or whatever Dr. Friedmann's remedy is. Thus, by a technicality, he will evade the federal law which, for the purpose of protecting the public against impure and dangerous serums and vaccines, places all these preparations which are subject to interstate commerce under the control of the Public Health Service. State laws are slow of enactment and slower of enforcement. This plan will sweep aside the strong arm of the Public Health Service, which otherwise would protect the unfortunate consumptives. It will allow the promoter to make and sell to the victims of disease, at any profit he sees fit, a secret product, the value of which rests entirely on Friedmann's unsupported statements. Suppose an American physician went to Berlin with unproved claims for some new treatment of consumption. Suppose he refused to produce proof of his statements, refused to submit his remedy to other scientific men, attempted to evade the German laws, disregarded German officials and, finally, through a legal technicality, planned to bleed the German consumptive of his scanty means by selling him a preparation of unproved value and possible danger? Would the German people permit their sick to be the victims of such a scheme? *The Journal of the American Medical Association*, asks: Why did Friedmann come to the United States? Because, says *The Journal*, we have, in Europe, the reputation of being "easy." Because this country is supposed to be the home of the get-rich-quick promoter. The American people have no respect for the man who uses

legal technicalities for profit or to escape punishment. Will the American public and the American press tolerate this attempt to make our unfortunate consumptives a source of gain for a rapacious foreigner, promoting a remedy of unproved merit in violation of the spirit of our laws?

THE MOVEMENT FOR A NATIONAL DEPARTMENT OF HEALTH.

There have been two distinct plans for securing a federal bureau or department. The first has been by the attempt to create a board, council, bureau or department, *de novo*, without relation to existing governmental activities; the second, to reach the same end by the gradual development and expansion of existing bureaus into a larger organization. These two methods, while differing in plan, have the same ultimate purpose, namely, the development of a government agency that will be devoted to the advancement of public health and the reduction of preventable diseases. Not merely is the final outcome of these two methods the same; they are not even antagonistic at any stage. There is no reason why the advocates of a great national department of health should refuse, while this desirable purpose is being advanced, to lend their influence and energies to strengthening and broadening the existing health organization. On the other hand, there is no reason why the advocates of the plan to develop the present bureau should fail to recognize the fact that a great independent national department of health is to be, must be, the ultimate outcome of their efforts to build up and strengthen the present machinery. In fact, instead of there being any conflict in aim or intention between these two plans, the difference is solely one of method and expediency. These two plans are not even necessarily alternative. They can both be carried on at the same time. While we are striving to secure a department we can also build up the existing bureau. While efforts are being made to broaden and strengthen the bureau, simultaneous efforts can be made to secure a department. Let us have, says *The Journal of the American Medical Association*, a careful and dispassionate study of the facts,

a calm and sagacious appreciation of the present situation and an agreement on a practical program which will offer the best chance of securing what is desired by all the friends of public welfare, namely, that unification of governmental activities which will best conserve the lives and the vitality of our people.

CRIMINAL CHARACTERISTICS.

The mental and moral shortcomings of the criminal classes are generally accepted facts. As a class they are physically defective. The British Association for the Advancement of Science reported on the examination of 3,000 criminals and found them to be about 2 inches shorter and 17 pounds lighter than the average Englishman. Baer of Berlin, reporting on the German criminal, gives much the same results. Few reliable data are to be found in American literature. Hamilton Wey, reporting on 529 boys at the Elmira Reformatory of an average age between 20 and 21 years, gives an average height of 65½ inches and an average weight of 133 pounds, which is below that of college boys.

An investigation of height at the Wisconsin State Prison, shows that the Wisconsin convict is 1.8 inches below the average American height. The 1,521 criminals reported on are, at the average of 36 years and 6 months most markedly inferior to the average American citizen in height. He lacks 1.4 inches of the stature of the average freshman at our state university, and is 2 inches shorter than the average Harvard student. He lacks 1.3 inches of the height of the men and boys who enlisted in the Civil War and is 3 inches inferior in height to the Fellows of the Royal Society of England and English professional men.

The murderer is well above the average criminal in height, somewhat below in weight, but leading in chest measurement and expansion. The thief is well above the average in height and slightly below in weight. Criminals through fraud, though most often in-door workers, outweigh all others, and have a good chest measurement though a small expansion, as would be expected. The sexual criminals are older than any of the other classes and the shortest in stature, excepting the habitual criminals, who lack 2.1 inches in height of the average Wisconsin boy

just out of high school, lack 2.5 inches of the height of the average American of their age and 2.7 inches of the height of the average Harvard student as reported by Professor Sargent. These facts are the result of an investigation made by Dr. Sleyster, prison surgeon at Waupun, Wis. A report of his observations appears in a recent issue of *The Journal of the American Medical Association*.

TRACHOMA.

This disease of the eyes is becoming of greater importance as it becomes more widespread throughout our country. In 1897 the Secretary of the Treasury declared trachoma a dangerous contagious disease, and denied an immigrant afflicted with it entrance to this country, because of the discovery that the disease was being introduced and disseminated by immigrants. It seems to be undisputed that no country is free from the ravages of the disease, the history of which goes back to ancient times, and that no race is immune from it and no age exempt, except the very young. The cause of trachoma is not yet known, as the specific germ has not yet been discovered. The disease occurs in groups, in localities, in houses, in factories, and in schools, and is spread by contact or by contamination with articles like common towels, which are handled by the afflicted patient and his fellows.

The seriousness of trachoma, its contagiousness, the knowledge that thousands of would-be immigrants are waiting to come to America if restriction of this disease is removed, the amount of it already in this country, and, especially, its concentration in certain localities, mean that measures for its prevention should be inaugurated by every state, city and town where the disease has been discovered. Poverty, crowding, dirt and articles used in common tend to spread this infection rapidly. While the number of persons having trachoma may be diminishing in some of our larger cities where both the government and the local authorities are alert to the danger of the disease and to the segregation necessary, other cities and communities should pass such ordinances as would cause every case of trachoma to be reported. School children should be inspected for this disease. Factories should also be inspected, and where the disease is discovered

the owners should take measures to prevent its spread and to eliminate it if possible. A person with trachoma should be isolated and treated until he is well. A child who is discovered to have trachoma and is banished from school should be followed to its home by a visiting nurse or some inspector from the board of health to insure that the child does not spread contagion in its own home. School washrooms should have faucets for running water which are controlled by foot-pressure, so that the hands need not touch the faucets. The common towel should be abolished with the common drinking cup. These rules for cleanliness apply also to factories, hotels, office buildings and all public institutions.

AN EARLY REFERENCE TO INFECTION CARRIERS.

That healthy persons may be carriers of infection by the persistence of disease germs in the healthy body has been known for fifteen or twenty years. The possibility of this kind of carrier of infection does not seem to have been at all familiar to our forefathers, and yet the conception seems to be expressed quite clearly by Richard Mead, the father of quarantine, when he said, in 1721: "If there be any Contagious Distemper in the Ship: The *Sound* men should leave their cloaths, which should be burnt; the men washed and shaved; and having fresh Cloaths, should stay in *Lazaretto* thirty to forty days. The reason for this is, because Persons may be recovered from a Disease themselves and yet retain *matter of Infection* about them a considerable time." In these words, says *The Journal of the American Medical Association*, are expressed a truth the significance of which was not clearly grasped until nearly two hundred years after they were written. Richard Mead, is the author also of the following dictum which, besides its general application, has a very special meaning for the typhoid carrier: "As nastiness is a great source of *Infection*, so *cleanliness* is the greatest *Preventative*."

THE LARGER ASPECTS OF SANITATION.

A great actor declared as essential to an ideal dramatic performance the interaction of three factors: a good play, enthusiastic actors, and a

sympathetic audience. In like manner wonders could be performed in communal sanitation by the interrelation of sound science, able health officers, and an educated, right-determining public. Science has done her part; she has demonstrated that all infectious diseases (tuberculosis, typhoid fever, diphtheria and the rest) can be abolished from human experience. There are many health officials ready and anxious to consummate this enterprise; but there are too few of these. Thirdly, there is needed a convinced, loyal and cooperating laity. If we could have constant supervision, by trained hygienists, of large numbers of working men and women collected in factories and the like, epidemics would be detected in their incipency, fewer persons would be involved, suffering would be diminished, death prevented, material loss avoided, and the general well-being vouchsafed. Corporations having in their employ hundreds or thousands of people should, according to *The Journal of the American Medical Association*, perfect some form of organization for instituting methods to insure cleanliness in both shop and home, fresh air, pure water and proper toilet arrangements, with early detection of infection, through careful observation and the isolation of those wage-earners who have been stricken.

WHY THIS AMENDMENT?

Paragraph 6 of Section 7 of the federal Food and Drugs Act says that a food shall be deemed adulterated:

If it consists in whole or in part of a filthy, decomposed, or putrid animal or vegetable substance, or any portion of an animal unfit for food, whether manufactured or not, or if it is the product of a diseased animal, or one that has died otherwise than by slaughter.

A bill has been presented in the House of Representatives to amend the act by striking out the words "or vegetable" in this paragraph. Why this amendment? asks *The Journal of the American Medical Association*. What value will it be to the public? Or is it in the interests of those manufacturers who would sell putrid tomato pulp and other decayed vegetable matter as food? We are curious to know.

660 CASES OF

GONORRHEAL INFECTION

SUCH AS

**ARTHRITIS,
URETHRITIS,
VAGINITIS,
EPIDIDYMITIS,
ORCHITIS,
PROSTATITIS,
VESICULITIS,
OPHTHALMITIS,
IRITIS,
ENDOMETRITIS,
SALPINGITIS,**

TREATED WITH

GONORRHEA PHYLACOGEN.

539 RECOVERIES.

121 FAILURES.

SEND FOR DESCRIPTIVE LITERATURE.

PARKE, DAVIS & CO.

DETROIT, MICH.

THERAPEUTIC NOTES.

COD LIVER OIL IN DEBILITATED STATES.—The response of general debility, particularly if following an acute disease process, to cod liver oil, in a large measure, depends upon the form in which the oil is given. As to the power of cod liver oil to supply the tissues with nourishment there can be no question, but as in most of the conditions indicating cod liver oil there is impaired digestive function, it is clearly obvious that unless care be shown in the choice of preparation, too great a strain will be thrown upon the gastric powers with a consequent defeat of purpose. In this connection it should be remembered that while Cord. Ext. Ol. Morrhuæ Comp. (Hagee) contains the nourishing elements of the cod liver oil, it is palatable in the highest degree and does not cause the distress following the use of the oil not so treated. Cord. Ext. Ol. Morrhuæ Comp. (Hagee) will prove acceptable to delicate stomachs, a feature that makes it of unusual value in debilitated states.

THERAPY OF NERVOUS HEADACHES.—The advantages of PASADYNE (Daniel), the concentrated tincture of *Passiflora Incarnata*, as a means of relief in headaches of a nervous type are so marked that it seems to warrant the distinction of being put in a class by itself. In this condition, PASADYNE (Daniel) not only soothes the cephalalgia but also exerts a potent force on the nervous element so noticeable in these cases. It may be given to women and children without causing unpleasant symptoms, often times a feature of other agents. A sample bottle for trial may be had by addressing the laboratory of John B. Daniel, Atlanta, Ga.

THE GOOD OLD SUMMER TIME.—The coming summer season will no doubt produce its usual crop of cases for physicians, peculiar to the season.

Insect Bites, Bee Stings, Sunburn and its frequently following Dermatitis, Strains and Small Joint Injuries from base-ball and other sports, Sprained Ankles, Echemosed Eyes, Infected Wounds, etc., will demand the first attention of the physician and a second thought will be a suitable remedy.

All inflammatory conditions, whether from infective or traumatic causes, rapidly subside when dressed with Antiphlogistine. Its convenience of application with the assurance of satisfactory therapeutic results, makes it almost indispensable in emergency work.

THE THERAPY OF NEUROTIC STATES.—The bromides have served no more useful purpose than in those unstable nervous states so frequently met with in women, and yet owing to this very instability their administration must be supervised with the greatest care if the patient is to be guarded from the disadvantages which accompany the use of these salts.

The fact that BROMIDIA (Battle) represents the therapeutic height of the bromides and is free from their disagreeable side-effects, has made this bromide preparation a great favorite in the treatment of female neuroses.

From it may be expected the full therapeutic effect of the bromides with the further advantage of freedom from the untoward effects of hastily prepared bromide mixtures.

Gastric intolerance is obviated by the extreme care exercised in choosing the contained drugs in BROMIDIA (Battle) and in compounding them.

AN ALLY WORTHY OF CONFIDENCE.—It is going on toward 20 years since Gray's Glycerine Tonic Comp. was first placed at the service of the medical profession. During all this period Gray's Glycerine Tonic Comp. has maintained the standards that first attracted attention and the busy practitioner has ever found it an ally worthy of confidence. It never disappoints and in the treatment of atonic conditions, particularly of the gastro-intestinal tract, it is often the one remedy that will produce tangible and satisfactory results. The physician who does not use it in his practice is denying his patient many benefits that can be obtained in no other way.

CHRONIC CATARRHAL DISEASES.—Chronic catarrh never fails to indicate general constitutional debility. Local treatment is always desirable but for permanent results efforts must be directed toward promoting general functional activity throughout the body, and a general increase of systemic vitality. The notable capacity of Gray's Glycerine Tonic Comp. in this direction readily accounts for the gratifying results that can be accomplished through its use in the treatment of all chronic catarrhal affections, but especially those of the gastro-intestinal canal and respiratory tract. The particularly gratifying features in the results accomplished by Gray's Glycerine Tonic Comp. are their substantial and permanent character. This is naturally to be expected since they are brought about through restoring the physiologic balance of the whole organism.

VASO-MOTOR DERANGEMENTS.—The part played by the vaso-motor system in countless diseases is at last thoroughly recognized. As a consequence, circulatory disorders are among the most common functional ailments that the modern physician is called upon to correct. Various heart tonics and stimulants are usually employed, but the effect of these is rarely more than temporary. To re-establish a circulatory equilibrium that offers real and substantial relief from the distressing symptoms that call most insistently for treatment requires a systematic building up of the whole body. Experience has shown that no remedy at the command of the profession is more serviceable in this direction than Gray's Glycerine Tonic Comp.

For nearly 20 years this standard tonic has filled an important place in the armamentarium of the country's leading physicians. Its therapeutic efficiency in restoring systemic vitality and thus overcoming functional disorders of the vaso-motor or circulatory system is not the least of the qualities that account for its widespread use. The results, however, that can be accomplished in many cases of cardiac weakness have led many physicians to employ it almost as a routine remedy at the first sign of an embarrassed or flagging circulation.

THE NEW TREATMENT FOR GONORRHEAL INFECTIONS.—Physicians who have had any considerable experience in the treatment of gonorrhea and its complications know how stubborn many of these cases are; how, not infrequently, they resist ordinary routine methods for weeks and months. The average general practitioner encounters these cases with unpleasant forebodings. He realizes that treatment of them is more or less empirical. He experiences a sense of relief when he can bid "good-bye" to one of them—when he can discharge it as "cured."

For the reasons enumerated any new therapeutic agent which promises a fair percentage of recoveries in gonorrhea and its sequelae is certain to be accorded a warm reception by the medical profession.

Is Gonorrhea Phylacogen such an agent? There is a basis for the belief that it is. Here are some figures that seem to lend assurance: "660 cases treated; 539 recoveries; 121 failures." These figures pertain to carefully recorded cases, under observation in various sections of the United States and embracing both hospital and private practice. They include such complications as gonorrheal arthritis, chronic urethritis, vaginitis, epididymitis, orchitis, prostatitis, vesiculitis, ophthalmitis, iritis, endometritis and salpingitis. These cases were reported to Messrs. Parke, Davis & Co., producers of the Schafer Phylacogens. The results point clearly to this conclusion: Gonorrhea Phylacogen is worthy of careful, serious consideration.

SOPORIFIC POWER WITHOUT EVIL EFFECT.—Inasmuch as all too many excellent soporific agents unfortunately produce evil effects in connection with their tranquilizing influence, the exceptional value of one which is free from bad qualities will be greatly appreciated by all practitioners. It is this appreciation of therapeutic merit which has brought PASADYNE (Daniel) into such wide use in relief of sleeplessness, nervous irritability, and even pain. As is well known PASADYNE is the Concentrated Tincture of *Passiflora Incarnata*, the advantages of which have been known by a large part of the profession for many years. By employing PASADYNE (Daniel) one may secure full soporific power without distressing after-effects.

Samples supplied the medical profession if request is mailed to the Laboratory of John B. Daniel, Atlanta, Ga.

THE AFTER CARE OF CHILDREN'S ILLS.—With the advent of school-days, and the daily association of many children in the class room, the contagious diseases of childhood develop and multiply. The exanthemata, as well as diphtheria, whooping cough, etc., comprise a considerable proportion of the diseases that the family physician is called upon to treat during the late Fall and Winter months. The robust child, with but a mild infection, frequently recovers quickly and, perhaps, requires but little attention during the convalescent period, while the child whose general nutrition is "below par" usually emerges from the acute attack with a condition of Anemia and general vital depreciation. In the large majority of cases, it is undoubtedly wise to encourage and hasten convalescence by means of a palatable and efficient hematinic and general tonic. For this



Glyco-Thymoline is of benefit for teething babies; a little rubbed on the gums rapidly reduces the inflammation and conserves the little one's comfort.

Used for flushing the colon, it eliminates all septic matter, preventing autointoxication and reducing the temperature.

Glyco-Thymoline used internally corrects hyperacidity and prevents fermentation.

Kress & Owen Company

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purpose Pepto-Mangan (Gude) is especially valuable. All children like it and take it readily; it does not irritate the digestive organs, but, to the contrary, increases the appetite and assists in the absorption and assimilation of the child's nourishment. As it is non-astringent, it does not, as other ferruginous remedies do, cause or increase constipation. As Pepto-Mangan is prompt and efficient is a blood builder and general reconstructive, it should be preferred among children whenever medication of a general tonic nature is indicated.

THE PALLID SCHOOL GIRL.—In view of the modern methods of education, which force the scholar at top speed, it is not to be wondered at that the strenuous courses of study prescribed for the adolescent girl more than frequently result in a general break down of both health and spirits. Each winter the physician is consulted in such cases and almost always finds the patient anemic, nervous and more or less de-vitalized. In most instances a rest of a week or two, together with an efficient tonic, enables the patient to take up her school work again with renewed energy. Pepto-Mangan (Gude) is just the hematinic needed, as it acts promptly to increase the red cells and hemoglobin, and to tone up the organism generally. It is particularly suitable for young girls because it never induces or increases constipation.

DECREASE OF BIRTHS IN BERLIN.

The director of the Berlin statistical bureau has just made a report as to the decrease of births in Berlin in 1911. In this year there were born in Berlin 44,834 children—a number which already in 1876 was surpassed by 1,464, that is at a time when the population amounted not quite to half of the present. As reckoned per 1,000 of the population, the number of births amounted at that time to 47.19, while in 1911 it was 21.64—a decrease of not less than 54.1 per cent. Comparing the figures of legitimate and illegitimate children, the number of illegitimately born has decreased. But this consideration is of small consequence as regards the real point at issue. It is only necessary to point out that there is no reason for supposing that the number of illegitimates is decreasing. Investigations of the figures in Berlin has been decreasing since nearly the middle of the 70s; in 1910 it amounted to 37.7 per cent. of the maximum reached in 1876. A characteristic feature is the marked decrease of mothers who have borne three or more children in the last few years. The decrease in the number of births in the last five years was least among

the younger married women capable of bearing children, and greatest among the older. As regards the different parts of the city, those populated mostly by working classes show the greatest proportional decrease of legitimate births. These figures are reported by the Berlin correspondent of *The Journal of the American Medical Association*.

For temporary occlusion of a large vessel a soft clamp, compressing fingers or angulation by traction or a tape of silk strand placed beneath are all to be preferred to the application of a ligature, which may damage the vessel wall.—S. S.

THE EUGENIST SHEPHERD TO HIS LOVE.

Come live with me, and be my love;
We have the sanction of the Gov-
ernment, and we're approved, O queen,
By the Dep't of Hygiene.

—*Metropolitan*.

GIRL OF THE PERIOD.

Little girl, you look so small,
Don't you wear no clothes, at all
Don't you wear no shimmy-skirt,
Don't you wear no petty-skirt—
Just your corset and your hose,
Are those all of your underclothes?

Little girl, when on the street
You appear to be all feet,
With your dress so very tight
You surely are an awful sight.
Nothing on to keep you warm,
Crazy just to show your form.

Little girl, you won't live long,
Just because you dress all wrong.
Can't you wear more underclothes
Than your corset and your hose?
After awhile I do believe
You will dress like mother Eve.

—D. E. A. R., in *The Outlook*.

RAT-PROOF BUILDINGS.

The recent elemental catastrophes—the cyclones in the middle West, and the floods in that vast region watered by the Ohio—have destroyed many hundreds of buildings. Here, out of misfortune, much good should come. A timely appeal for the rat-proofing of dwellings and other buildings at present existing, under construction or in contemplation, comes from the United States Public Health Service. Those about to erect a new building or repair an old one, whether of frame, brick, rock, concrete or other construction, may learn from a recent bulletin issued from Washington what sanitary and economic benefits are to be derived from permanent rat-proofing; and measures to such ends should be demanded by prospective owners as a part of building contracts. The rat is far too prolific to be exterminated by such agencies as traps, poisons, gases and the like; these may reduce the numbers of the rodents, but if there is food within reach, the surviving rats will have more to eat proportionately, and procreation will be stimulated the more. Rat extermination can be effective only by cutting off the rats' food supply. The bulletin contains all necessary information to this end, so far as relates to buildings. Those already erected can be rat-proofed by the closure of all natural or accidental openings; by being remodeled with material impervious to rats; by the removal of structures which will give refuge to rats, and by the protection or removal of foods that rats will eat.

THE VALUE OF ANIMAL EXPERIMENTATION.

In a recent issue of *The Journal of the American Medical Association* Prof. Walter B. Cannon, head of the Department of Physiology of Harvard Medical School, reviews the efforts that have been made in New York and Pennsylvania to restrict scientific investigation and urges that everything possible be done to enlighten the intelligent public as to the great practical results of animal experimentation, the important problems that remain to be solved, the ideals of the investigators who are trying to solve these problems, and the essential humanity of their methods.

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 DYSMENORRHEA
 MENORRHAGIA
 METRORRHAGIA
 ETC.**

ERGOAPIOL (Smith) is supplied only in packages containing twenty capsules.

DOSE: One to two capsules three or four times a day. < < <

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Dr. William H. Welch of Johns Hopkins has summed up very precisely the reasons for opposing the efforts of the antivivisectionists. "The fundamental objection," he declared, "to the various legislative proposals to regulate animal experimentation by a system of licenses, of inspections, of specifications as to the purposes and conduct of the experiments, is that the enactment of such statutes would take the control of a matter of the highest importance to human welfare, and one requiring special knowledge and training and skill, out of the hands of the experts, who possess these qualifications, and would place it in charge of those who have not the requisite technical knowledge and experience. Not those who know, but those who do not know, would be given a discretion which might prove disastrous to the future of scientific medicine. This is a monstrously wrong principle to embody in legislation. Science has waged a long warfare through the centuries for freedom of investigation. The last of its battles is being waged today for freedom of experimental research in medicine. While I do not doubt the issue of this battle, I conceive it to be the duty of the public and of the press to support the cause of freedom in this contest, which is likewise that of true humanity."

WHO IS RESPONSIBLE FOR THE LITHIA WATER

FRAUD?

It has long been recognized by physicians that one of the greatest frauds perpetrated on the American public is the exploitation of the so-called "lithia-waters"—some of the most widely sold of which contain less lithia than does the water of most of the rivers of the United States. Millions of dollars have been expended on these waters and now the United States government, under the federal Food and Drugs Act, is spending large sums in an effort to compel the dealers to label their products truthfully, and the dealers are spending still larger sums in an effort to perpetuate the present labels.

Who is really responsible for the "lithia water" delusion? "We regret to have to state," says *The Journal of the American Medical Association*, "that it is chiefly the medical profession. It originated in the medical profession; it was founded on some crude and unscientific experiments and perpetuated by members of the pro-

fession blindly accepting the statements of exploiters of all kinds of waters dubbed 'lithia waters' to meet the demand originally created by physicians. In a similar way the profession is largely responsible for many of the 'lithia' nostrums that are being foisted on the public as 'uric acid solvents.'

"The medical profession should recognize its part in the origination and perpetuation of such frauds as that of the 'lithia waters,' and our medical schools should realize that graduates of today in their attitude on these important subjects are often relatively no better off, if indeed they are as well off, as graduates of two or three decades ago."

PROGRESS OF HOOKWORM ERADICATION.

The report of the third year of activity of the Rockefeller Sanitary Commission for the Eradication of Hookworm shows commendable progress.

A survey of foreign countries shows a general infection of those parts of the earth lying between 36 degrees north latitude and 30 degrees south latitude, a belt of 66 degrees in width encircling the earth. Within this belt is included a considerable part of the United States; eleven states in particular have been found heavily infected. In Texas 83 counties have the infection, and of the 884 counties in the other ten states infection has been found in 796. It is presumable that the remaining 88 counties will also be found infected when the work is extended to them. In all, 238,755 persons were treated at an expenditure per person treated of 77 cents, as compared with 140,378 persons treated in 1911 at an average expenditure per person at \$1.05, and 14,443 treated in 1910 at an average expenditure per person of \$4.66. In the three years a total of 393,566 persons have been treated for uncinariasis.

The total expenditure of the commission for the year was \$184,671.60, in addition to which the sum of \$22,482.44 was spent by counties and \$19,972.52 by states for fighting the hookworm, making a grand total of \$227,126.56. The microscopic examinations made in 1912 numbered 326,951, as against 90,724 in 1911 and 14,789 in 1910.

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THE MOVING PICTURE SHOW AS A HEALTH PROBLEM.

The popularity of the moving-picture theatre as a form of cheap entertainment for the masses has directed attention to several of its undesirable features. In Chicago it is said that 250,000 persons, a considerable portion of whom are children, attend these theaters daily. Most of the theater buildings are cheap store-rooms, remodeled for the purpose, without adequate provision for ventilation. It is estimated that the air in one of these theaters will pass through the lungs of the audience in from six to eight minutes. They therefore constitute, as the Chicago Health Bulletin remarks, one of the health problems called into existence by modern customs and conditions. In cities all over the country, the problem is practically the same, involving the role of contact or close association in the spread of "colds" and the various infectious diseases. It is a matter of observation that the incidence of the various infective diseases of childhood immediately increases on the opening of the schools in the fall on account of the increased opportunity for contact between infected and non-infected children. It may therefore be reasonably assumed that the close contact in the moving-picture theater is also a factor in the distribution of infectious diseases. Since it is not easy to exclude those who have diseases or who come from home where disease exists, well-considered regulations as to ventilation and sanitation should be enforced for the protection of the public.

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TABLE OF CONTENTS

ORIGINAL ARTICLES:—

Diagnosis and Treatment of Syphilis,
By Judson Daland, M. D. 157

The Ehrlich Remedy in the Treatment of
Syphilis,
By Judson Daland, M. D. 159

The Value and Meaning of the Wassermann
Reaction,
By E. H. Buttles, M. D. 163

EDITORIAL 166

NEWS ITEMS 168

AN EPITOME OF CURRENT MEDICAL LITERATURE... 169

THERAPEUTIC NOTES xii

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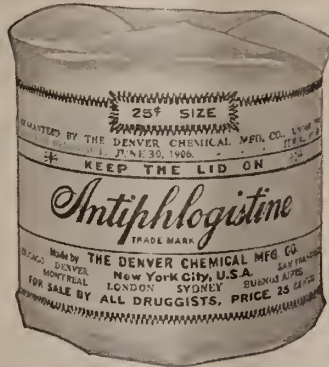
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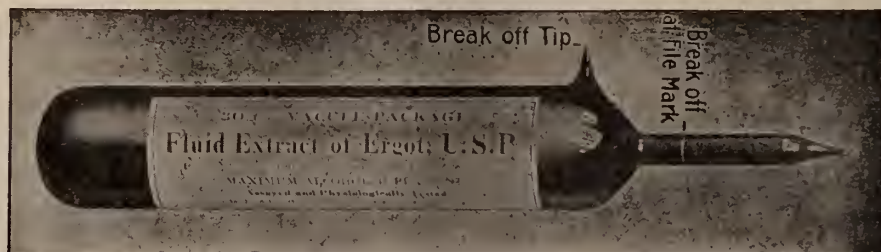
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effective, but may help. His method is to make use in various ways of the conical wire-mesh fly-trap, which is familiar to almost every one, in such a way as to turn the tables on the flies and "put them in jail and let ourselves out." The plan involves, of course, the abolition as far as possible of all breeding-and feeding-places for flies and the application of the fly-trap mentioned above to the garbage-can, to the screens on windows, to the covers on manure-bins, etc., all of which can be done by a little mechanical ingenuity. Garbage-cans are on the market which have a cover larger than the can and not fitting down closely on it so that the flies

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gain access to the can under the cover and escape through a hole in the cover over which is fixed a fly trap. In fighting the fly, Hodge has found that the essentials of a successful campaign are to transfer the fight against the fly from the house to outdoors, and then to exterminate it. Another essential feature in a town or city is that households must cooperate. One ignorant or careless home can breed flies enough to vitiate the best endeavors of a whole town. Hodge has succeeded in his neighborhood in practically eliminating flies; he uses no screen in windows and doors, and can sit out doors or have windows or doors open at any time without molestation. As flies begin to breed early in the spring and as they breed with marvelous rapidity, the time to arrange for a fly-campaign is in the winter.

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Vermont Medical Monthly.

VOL. XIX.

JULY 15, 1913.

NUMBER 7

ORIGINAL ARTICLES.

DIAGNOSIS AND TREATMENT OF SYPHILIS.*

BY

DR. JUDSON DALAND.

Syphilis has scourged humanity for many centuries and it is a remarkable fact that only during the last decade has its exact nature been known and diagnosis and treatment thoroughly instituted.

In 1902 the transmissibility of syphilis to apes was first demonstrated by Shaudin and about this time Bordet and Gengon demonstrated that the serum of the blood was specifically changed in certain specific diseases and Wassermann in 1907 applied these studies to syphilis and originated the diagnostic complement test known by his name. In 1910 Paul Ehrlich discovered a new specific for syphilis, salvarsan.

A better comprehension of the extraordinary rapidity of these remarkable discoveries is possible when one considers that in nine years there was accomplished that which had eluded research workers during all the preceding centuries.

Syphilis may be classified as primary, secondary, tertiary and congenital. Latent syphilis is the disease existing without symptoms; and its presence is demonstrated by the history of the patient and the securing of a positive Wassermann reaction. While under treatment tertiary syphilis may show periods when no sign or symptom of the disease exists but later may again become manifest. It is insufficient to regard syphilis as cured unless no signs or symptoms show themselves in from three to five years, during all of which time the Wassermann reaction must be negative.

The diagnosis of primary syphilis and most cases of secondary syphilis are usually established beyond doubt by the discovery of the spirochete pallida in the fresh lesions and by

*Given at the 99th annual meeting of the Vermont State Medical Society.

a positive Wassermann reaction. Occasionally, in doubtful cases, inoculations of monkeys, rabbits or guinea pigs corroborate or establish the diagnosis. The Wassermann reaction in the hands of a skilled expert who takes cognizance, not only of all possible laboratory errors, but also clinical conditions, has a diagnostic value of more than 85%. This serum test is invaluable in establishing the diagnosis of syphilis in obscure cases and is of enormous corroborative importance when taken in connection with the symptoms of this disease. This complement fixation test also gives, in a measure, a quantitative idea of the amount of infection, the rule being that the infection is greatest when no hemolysis occurs and when moderate or slight hemolysis is present, the infection is less severe or less active. The Wassermann reaction is invaluable in estimating the value of treatment and also gives positive indications as to the duration of treatment. The serum test for syphilis is the only method by which we are able to convince ourselves that a cure has taken place. In paresis and locomotor ataxia not infrequently no symptom of syphilis shows itself until considerable destruction of important structures of the nervous system has already occurred. Therefore, the early diagnosis of syphilis without symptoms, which is possible by the aid of the Wassermann reaction, is of incalculable value from the standpoint of prophylaxis. The great prophylactic value of a 30% mercurial ointment applied to the glans penis and meatus urinarius, immediately after coitus, is now universally accepted, and the sceptical will be convinced if a study be made of the statistics of the United States Navy.

The administration of mercury in the treatment of certain forms of syphilis is obligatory and the same is true of salvarsan. Many cases of tertiary, nervous and congenital syphilis require in their treatment, both mercury and salvarsan.

The Ehrlich remedy, known as salvarsan, is a highly complex organic arsenical compound discovered in the Ehrlich laboratory where rabbits, inoculated with syphilis from a chancre

were sterilized by this remedy within 24 hours, the spirochete pallida formerly existing having disappeared. This brilliant therapeutic experiment rapidly led to the hope that syphilis in man would be eradicated in a similar manner. It is now known that many cases of primary syphilis have been cured by one dose of salvarsan; and it is equally well known that many cases of secondary and practically all cases of tertiary and congenital syphilis require multiple doses and the association of mercurial treatment. In primary syphilis the chancre should be excised wherever possible with the object of removing as much as possible of the syphilitic tissue but not with the object of producing a cure.

An adult should receive 0.5 or 0.6 of a gramme of salvarsan. Although certain cases of primary syphilis have been cured by one dose, it is desirable that a second injection should be given one week after the primary injection. It is to be remembered that in the very beginning of the primary stage the Wassermann reaction is absent. Therefore, when a chancre shows the presence of spirochete pallida the treatment should be instantaneously begun, because the earlier the treatment the more certain a cure. Within 24 hours after the administration of salvarsan the chancre ordinarily presents the appearance of a healthy, granulating wound and no spirochete can be discovered. The observation is of the greatest importance from the standpoint of prophylaxis, as prostitutes and others are unable to transmit the disease after an injection.

At the expiration of one month after the second injection, the sero-diagnostic test for syphilis should be made, and if negative, should be repeated at intervals of from two to four months during the next two or three years; but if positive, prompt reinjection is necessary. In secondary syphilis the treatment is identical, but not infrequently a third or fourth injection may be required before the blood remains negative to Wassermann reaction. Relapses, i. e., the patient's blood again becoming positive to the Wassermann reaction, are not uncommon, and when such cases occur, mercury must also be employed. In tertiary syphilis 0.6 of a gramme of salvarsan should be employed intravenously, repeated in one week and a third injection given two weeks thereafter, immediately followed by a short course of mercury, at the expiration of which time a fourth injection of salvarsan is usually necessary. The after treatment is governed by

the results of the Wassermann reaction. As a rule the objective signs of the disease rather quickly disappear; and if treatment is energetically carried out, do not reappear, but the serum is prone to again become strongly positive, which in turn demands a continuance of treatment. This drug is particularly valuable in those cases of tertiary syphilis that are refractory to mercury, and the effect over the lesions is sometimes little less than marvelous.

Salvarsan, in my experience, has seldom benefited paresis; but in a certain number of cases it has been able to arrest locomotor ataxia. Not infrequently these cases of syphilis of the nervous system have required mercury as well as salvarsan. The lancinating pains present in tabes dorsalis are aggravated by salvarsan or if absent, may be caused by the drug, but as a rule the pains disappear more or less quickly and are not apt to recur.

Time will not permit of a careful and minute discussion of the indications and contraindications for the use of the Ehrlich remedy or the exact method of making the solution and giving intravenous injections. A brief address on this subject will be found in the Transactions of the College of Physicians of Philadelphia, 1911.

DISCUSSION.

Dr. Johnson:—I would like to ask Dr. Daland a few questions in regard to syphilis in the infant or child, or in the mother nursing it.

Dr. Daland:—I think the questions that have been raised are most interesting, and the last question I shall answer first. The mother of a syphilitic child is usually infected and therefore may run no risk in nursing, but the danger to a healthy wet nurse is considerable. These new born children are suffering from spirochete pallida infection, and a healthy wet nurse is in danger of infection. I saw several syphilitic new born children in the hospital in Berlin, and if they received a proportionate dose of salvarsan they would die in a day or two. In all probability the death of such an enormous number of spirochete pallida occasioned by the drug liberated lethal quantities of toxins. The dose of the new born infant is therefore small, i. e., one-half of a centigrade as a preliminary dose, and after observing the results, the size of the next dose may be determined. I was personally assured that a number of these children would have surely died if treated without salvarsan. A nursing syphilitic child often improves after the mother has received an intravenous injection of salvarsan.

Syphilis is more widespread than we think. Many of us have felt that cases under our observation have been cured when they were not cured. Another point is the impossibility of gaining control over an ignorant patient. They wander away, and the fault is sometimes with us, but more often with them. Intelligent patients are more amenable to

reason and better results are possible. The ignorant infective syphilitic should be compelled to at once receive an injection of the Ehrlich remedy.

The point brought up in regard to the relative importance of the intramuscular and intravenous injection. In the beginning the only method employed was intramuscular, and those who have seen the intramuscular given remember the frequency of infiltration and severe pain. I am quite certain that often the injections are not properly given and the emulsion not properly prepared. One can understand that the intramuscular method always carries with it certain difficulties, but it is the easiest way and in certain cases the only method to employ. In very advanced cases where the tissues are partially devitalized, I always recommend the intramuscular injection of an emulsion made with sterile olive oil. As this drug is given for the purpose of killing the spirochete bacilli, it is most important that the drug is brought in contact with this parasite in a dose of concentration sufficient to kill.

The Wassermann reaction is a most complicated test, one in which mistakes readily occur. All practicing physicians should have Wassermann reactions made for them by a properly trained laboratory worker.

Question:—Have you had any experience in the giving of the 606 in solution of oil of sesamim, and what is the relationship between certain deaths following salvarsan, if any, and sudden deaths following antitoxin, for diphtheria? Murphy, in Chicago, was giving the salvarsan intramuscularly, and was using the oil of sesamim.

Dr. Daland:—The only oil I have had any experience with has been sterilized olive oil. Men have been so ignorant as to introduce intravenously salvarsan which was not properly prepared and death has occurred in consequence. Deaths have also occurred from giving the drug to patients suffering from advanced diseases of the heart or vessels or nervous system.

On motion of Dr. J. N. Jenne of Burlington, Dr. Judson Daland was unanimously elected an honorary member of the Vermont State Medical Society.

THE EHRlich REMEDY IN THE TREATMENT OF SYPHILIS.*

BY

JUDSON DALAND, M. D.,

Professor of Clinical Medicine at the Medico-Chirurgical College and Physician to the Medico-Chirurgical Hospital, Philadelphia.

Salvarsan is not only an important but a permanent addition to our means of combating syphilis. In certain cases it produces results most brilliant and not otherwise attainable. This drug, though at first administered solely intramuscularly, is now given almost always intravenously.

The ordinary intravenous dose for an adult is 0.5 gram; for an adolescent, 0.3 to 0.4 gram, and for a newborn infant, 0.01 gram. In gen-

eral paresis, cerebral syphilis, and tabes dorsalis it is wiser to employ at first but 0.4 gram. Later this dose may be increased to 0.5 gram. In advanced diseases of the nervous and cardiovascular system, salvarsan is contraindicated. Nevertheless, in a few cases brilliant results have been secured by injecting 0.2 gram in sterile oil suspension into each gluteal muscle. I have administered as much as 0.5 or 0.6 gram intravenously to children seven and eight years of age, suffering from congenital syphilis, without toxicity and with therapeutic benefit. Intramuscularly, I have given 0.9 gram to a case of paresis without toxicity and unfortunately without benefit. Almost all competent observers agree with Professor Ehrlich that salvarsan acts best when administered intravenously. The following method for the intravenous injection of salvarsan has proved satisfactory.

The 0.5 or 0.6 gram of salvarsan contained in the glass tube is placed in a sterile 25 c.c graduate, to which are added 19 c.c of hot sterile normal salt solution, and shaken vigorously until complete solution is secured. Under sterile conditions, add, drop by drop, shaking vigorously each time, a 20 per cent. solution of sodium hydroxide until the base has been entirely precipitated; and this procedure continued until the precipitate is redissolved, care being taken that no excess of sodium hydroxide is added. The solution should be alkaline, transparent, and pale sherry wine color. It should be strained through gauze, added to 130 c. c. of sterile normal salt solution at a temperature of 110° F. and placed in a water bath so as to maintain this temperature. A modification of Weinstraub's apparatus, made by George P. Pilling & Son, of Philadelphia, is sterilized, and 40 c.c. of hot normal salt solution introduced into the glass reservoir and allowed to fill and warm the rubber tube, all air being expelled by allowing this solution to flow from the needle until but 10 c.c. remain in the reservoir. After the vein has been overdilated by a tourniquet, the needle is introduced in the direction of the blood current, tourniquet immediately removed, and the 10 c.c. of normal salt solution remaining in the reservoir is allowed to flow. If the solution flows freely and no swelling appears in the neighborhood of the vein, it demonstrates that the needle is within the vein. If the solution does not flow, or flows slowly, or there is slight swelling, it is evident that the needle is not within the vein,

*From Transactions of the College of Physicians of Philadelphia.

and necessitates exposure of the vein by dissection.

If the needle has been properly introduced, the arsenobenzol solution is then poured into the reservoir and allowed to flow into the vein at a rate not exceeding 20 c.c. per sixty seconds. The rate of flow is regulated by raising or lowering the glass reservoir. Whenever possible a large vein should be selected so that the arsenobenzol solution will be diluted by a large quantity of flowing blood, thereby preventing the local effect of the drug upon the vein, *i. e.*, acute phlebitis and thrombosis.

When the vein is deeply situated or invisible or if the needle cannot be successfully introduced into the vein through the skin, the vein should be exposed by dissection; and a curved needle is safer and more convenient. The needle should be carefully held in its original position during the injection so as to avoid displacement or injury to the vein. The vein, which is frequently quite movable, should be held securely in place by the lateral pressure of the index finger and thumb; and the patient should remain absolutely motionless, as even a slight movement of any part of the body may dislodge the needle from the lumen of the vein. When the solution of salvarsan has almost disappeared from the reservoir, the rubber tube should be compressed and 20 c.c. of hot normal salt solution introduced into the reservoir and allowed to flow slowly through the tube, needle, and vein, following the arsenobenzol solution, until but 10 c.c. remain. If the cubic contents of the rubber tube is 10 c.c., the additional 10 c.c. will wash all the salvarsan from the needle and vein, thus preventing local injury, as this solution is an intense chemical irritant. The needle is then withdrawn, pressure applied, and adhesive plaster is the only dressing necessary.

As 0.6 gram of salvarsan is dissolved in 150 c.c. of hot distilled normal salt solution, each 25 c.c. is the equivalent of 0.1 gram of the drug, so that any dose less than the maximum may be easily calculated.

Complete sterility is absolutely necessary, and the intravenous injection is best given in a hospital with the aid of two assistants and a nurse. All apparatus and solutions should be sterilized immediately before the operation, and this is especially true of the physiological salt solution.

As a rule, the patient experiences no unpleasant sensations during the injection; but occasion-

ally there is suffusion of the eyes and face, cardiac palpitation or irregularity, vertigo or nausea. The occurrence of any of these symptoms is an indication that the injection should be suspended. When the injection has been completed, the patient should remain recumbent, make no muscular effort, and remain under a physician's observation for at least half an hour. In a few cases soon after the injection, one or more of the following symptoms may occur: headache, nausea, vomiting, muscular or intestinal cramps, or diarrhea. The temperature occasionally rises to 100° or 102° F., with or without chills. Professor Ehrlich believes that most of these symptoms will be obviated if the normal salt solution is sterilized immediately before the operation; but my experience is opposed to this view.

The after-management of patients who have received salvarsan intravenously varies. All should remain in bed the first twenty-four hours. In syphilis of the nervous or cardiovascular system or viscera, the patient should, in addition, remain in his room in bed or in a chair the second twenty-four hours. The third day he may move quietly about the hospital and afterward return home, and do no important mental or physical work for four days. These directions, so far as the second and third days are concerned, are of less importance and may be omitted in ordinary, uncomplicated cases of primary or secondary syphilis.

The advantages of the intravenous over all other methods of administering the Ehrlich remedy are, that the full dose of the drug circulates in the blood at one time, and thereby exerts its maximum spirillicide action, with, as a rule, no discomfort to the patient. The dangers from the intravenous injection of the Ehrlich remedy are: (1) Emboli from air or blood clot; (2) syncope; (3) convulsions or collapse, especially in paresis and luetic cardiovascular disease.

The amount and rate of absorption of the drug is always uncertain when administered intramuscularly, and severe pain often occurs followed by more or less infiltration, which is often exceedingly painful, and occasionally terminates in a sterile abscess from necrosis of the muscle. In marked chlorosis, anemia, or malnutrition these painful infiltrations may remain several weeks.

In disease of the nervous or cardiovascular system, where doubt exists as to the extent of the disease, or the wisdom of using salvarsan, and

in asthenia and emaciation, the intramuscular injection is to be preferred. The dose and method of making the alkaline solution for the intramuscular method is the same as that used in the intravenous method, excepting that the total volume is but 20 c.c., one-half being injected into the right, and the other half into the left gluteal muscle, which muscles are the best for the purpose. The drug may be made into a neutral emulsion by the so-called Wechsleman method; or it may be suspended in paraffin or sterile olive oil; or made into an alkaline solution, which is more rapidly and surely absorbed and may be preferred, despite the fact that it causes more pain. In patients who are weak, or where caution is necessary the drug may be administered as a sterile oil emulsion, prepared as follows:

Place the salvarsan in a sterile agate or glass mortar and add thereto, slowly, drop by drop, 8 or 9 c.c. of a recently sterilized olive oil, which should be continuously and thoroughly rubbed into the powder by means of a pestle, so that ultimately an emulsion, cream-like in appearance, is secured. This emulsion is drawn into a sterile syringe, the skin over the site of the puncture sterilized, and the needle introduced into the centre of the contracted gluteal muscle. As soon as the injection is completed the muscle should be relaxed and gentle massage applied and adhesive plaster placed over the puncture. Should pain or swelling occur, hot normal salt fomentations or hot magnesium sulphate may be applied, or, if necessary, morphine hypodermically.

In most cases the drug is erroneously introduced into the fat over the gluteal muscle in the neighborhood of the sciatic notch, thus interfering with absorption, causing unnecessary pain and infiltration, and not infrequently inflammation of the sciatic nerve from the local chemical irritant action of the remedy.

Professor Ehrlich's hope, based upon animal experimentation, that salvarsan would sterilize a syphilitic by one dose, is no longer entertained, although *therapie sterilisans magna* is possible in certain cases of primary syphilis. In most cases, however, the dose should be repeated in one week; and in tertiary, para- and congenital syphilis, additional doses are usually necessary. In primary syphilis the spirochete *pallida* disappear from the chancre within twenty-four hours, as is true in animals in which a

similar process has been induced experimentally. If the Wassermann reaction remains persistently negative for a period of two or more years, the patient may be viewed as being free from disease; if however, the Wassermann reaction becomes strongly positive, an injection should be given at once, and repeated until the serodiagnostic test becomes negative.

Naturally, the most favorable cases for treatment are the recent fresh infections; and as soon as the spirochete or the Wassermann reaction demonstrates the existence of a chancre, it should be excised if possible, with the idea of removing surgically as much of the infected material as possible, so that the remedy may address itself to the parasites existing in the lymphatics, blood, and other parts of the body. After the administration of salvarsan, usually within twenty-four hours no spirochetes are discoverable; and in forty-eight hours the chancre usually presents the appearance of a clean, punched-out ulcer, which rapidly heals.

In the ordinary forms of secondary syphilis two injections should be given at an interval of seven days; and four weeks later, if the Wassermann reaction is positive, a third injection, the endeavor being to secure a persistently negative serum reaction to syphilis.

Tertiary and congenital syphilis, as well as syphilis of the nervous system, may require several injections; and the patient should simultaneously receive the benefit of mercury and the iodides.

The contraindications of the use of the Ehrlich remedy are as follows: Advanced syphilitic myocarditis; advanced syphilitic disease of the aorta or coronary arteries, or aneurysm; syphilitic aortic insufficiency; hemiplegia from ruptured syphilitic artery; advanced general paresis; advanced disseminated sclerosis; advanced *tuberculosis dorsalis*; extreme debility or emaciation.

A number of deaths have followed the administration of the Ehrlich remedy and the reports of the autopsies are most instructive. Some were moribund when injected; one overworked physically the day after the injection and died a cardiovascular death. Most of the deaths, however, were due to advanced syphilis of the blood-vessels, more especially the aorta, with aortic insufficiency and syphilitic myocarditis. In about one-half of these cases these pathological conditions were not recognized during life. It is, therefore, evident that in all cases of long-stand-

ing syphilis a complete physical and general examination is necessary. One death occurred in a case of terminal diabetes mellitus, although benefit may be expected in early cases, syphilitic in origin.

A complication following the administration of salvarsan, which had aroused much discussion, is the occurrence of lesions of the optic, auditory, and other cranial and peripheral nerves. At present the preponderance of testimony is in favor of the supposition that these cases are examples of syphilitic relapses and are not due to arsenobenzol. Relatively, these cases are few in number; but absolutely, they have been recently more frequently observed than in the past.

The nerve most commonly affected is the auditory, and next in frequency is the optic. The ophthalmoscopic appearances in general conform more closely to the picture of syphilis rather than arsenic. In the present imperfect state of our knowledge it is impossible to formulate a definite, positive opinion; but I incline personally to the belief that although most of these cases of cranial nerve involvement are syphilitic relapses, a small percentage are in some way induced by salvarsan. Some observers believe that salvarsan induces a predisposition to these complications. Prior to the administration of salvarsan certain of these nerves may be slightly syphilitic, but not sufficiently to cause signs or symptoms, and, when the drug is injected, may produce a transitory hyperemia and swelling, precisely as is observed in old, dry inactive tertiary lesions of the skin. In view of the occasional involvement, more especially of the auditory and optic nerves, I believe that each case of advanced syphilis should be examined as to the integrity of these nerves before using the Ehrlich remedy. A complete physical and general examination, a urinalysis and a blood pressure observation should be made before injecting salvarsan. In hypertension or plethora a preliminary venesection is desirable. In cardiac weakness all physical and mental strain should be avoided, and the volume of the diluted arsenobenzol reduced to a minimum.

The indications for the use of the Ehrlich remedy are: (1) Cases refractory to mercury; (2) cases but partially improved by mercury; (3) cases showing an idiosyncrasy to mercury, whereby therapeutic inefficient doses produce mercurialism; (4) infective lesions occurring in

prostitutes, or the ignorant and careless; prompt treatment usually renders such patients non-infective within twenty-four hours; (5) the results in primary syphilis have been satisfactory, the local lesion usually healing promptly, as a rule much more rapidly than from the use of mercury. In one case but a single injection was necessary. In secondary syphilis similarly good results were frequently obtained, mucous patches usually quickly disappearing; likewise ulcerations of the mouth, tongue, and throat. The extreme pain and salivation accompanying these ulcerations disappeared in less than twenty-four hours.

The most brilliant results were obtained in certain cases of tertiary syphilis, as, for example, a gumma of the arm, which had resisted treatment for several months, in a few days showed healthy granulations and was soon healed. In a case of ulcerations of the face and neck, which had resisted mercury for nearly two years, in twenty-four hours showed marked hyperemia and swelling, healthy granulations soon appeared, so that healing was accomplished in a few weeks. A case of osteomyelitis of the tibia, which had received temporary relief by two surgical operations, relapsed, despite the continued use of mercury, and for nearly a year suffered continuously from severe, almost unbearable pains, preventing sleep, which pains entirely disappeared in fourteen hours after the injection of 0.6 gram of salvarsan intravenously, and a similar quantity intramuscularly. When the last report was received, four months later, the pain had not returned. A similar result was observed in an old woman suffering from syphilitic caries of the cranium.

A brilliant result was observed in the case of a male, aged fifty years, almost moribund, profoundly emaciated, and adynamic, with extreme thickening of the peripheral arteries and a thick psoriaform mass upon the right tibia. Under the influence of 0.4 gram of sterile oil emulsion of salvarsan introduced into the gluteal muscles, he rapidly gained in strength and color, and in a few days the psoriaform mass became detached, leaving a healthy skin beneath; and in the course of a month a gain of 22 pounds in weight was secured. The results in several cases of general paresis have been, on the whole, unsatisfactory. Dr. Francis X. Dercum has observed one case of early paresis favorably influenced by salvarsan, and Dr. Isaac Leopold has made a similar observation.

The lancinating pains of tabes dorsalis are usually aggravated after the administration of salvarsan for from twenty-four to forty-eight hours, and then marked improvement or cessation of the pains usually occurs. Although in many cases of locomotor ataxia, no special benefit, apart from the cessation of pains or disappearance of crisis, could be demonstrated in the comparatively short time that they were under observation, it is encouraging to note that in one case, which was under observation 13 months, while under the influence of salvarsan given intravenously a W. +++ was replaced by a W. —, which endured for almost four months, and was replaced by a W. ++, and after the last injection a negative phase was again secured. The behavior of the serum reaction for syphilis in this case, in my judgment, is evidence that the etiological factors *i. e.*, the spirochete pallida and its toxins, have been controlled and the disease brought to a standstill. Symptomatically, there has been a disappearance of pains, improvement in general health and marked diminution of ataxia. The following symptoms remained unchanged: (1) Unequal pupils; (2) loss of knee-jerk; (3) loss of sexual power.

Dr. Francis X. Dercum has had similar results in a case under observation for a similar period of time, with the exception that his patient showed an extraordinary gain in muscular coordination.

It is impossible at present to formulate definitely the exact value of salvarsan in tabes dorsalis; but the remedy should be advised in cases showing a strongly positive Wassermann reaction, with the object of bringing the syphilitic process to a standstill by causing the destruction of the spirochete pallida and securing a negative serodiagnostic test for syphilis. If an incurable and progressive disease, such as locomotor ataxia, can be arrested, no more should be expected, as the nerve structures destroyed cannot be replaced.

Despite the fact that salvarsan is contraindicated in advanced paresis, advanced locomotor ataxia, and syphilitic endarteritis, I have experimentally employed salvarsan in these cases and have observed no ill effect; but, on the contrary, in a few instances, have observed excellent results. If hypertension exists it should be reduced, especially in cardiovascular disease, and the quantity of the solution should be as small as possible, and introduced very slowly.

The results observed in congenital syphilitic choroiditis have, on the whole, been only partially satisfactory.

It is acknowledged that the only method by which syphilis can be diagnosticated, in the absence of signs or symptoms, is by the Wassermann reaction; and it is my belief that the presence of a positive serum reaction, in a case of syphilis where all symptoms and signs have disappeared, is evidence that there still exist spirochete pallida in numbers sufficient to make the antibodies that give a positive serum reaction, and, therefore, these patients are liable to relapses, or to the development later of serious diseases, such as paresis, tabes, aortic diseases, aneurysm, degeneration of the myocardium.

Experience has shown that it is sometimes difficult to maintain continuously a negative Wassermann reaction. Ordinarily a negative serum reaction is secured, but in one, two, or four months is replaced by a positive reaction if the disease is well advanced, the patient showing no signs or symptoms of syphilis and apparently in good health. Usually, such cases should have received a second intravenous injection within one week, and later a third or fourth. Naturally, many of these patients disappear and desire no further advice; but in the present state of our knowledge it is urgently necessary that advanced syphilis should be treated vigorously not only with salvarsan, but also with mercury and the iodides, with the object of attacking the disease simultaneously from all sides, thereby securing the prompt disappearance of lesions and a permanent negative Wassermann reaction. Hitherto, in order to study the effect of salvarsan, all cases of syphilis have been treated by the Ehrlich remedy alone.

THE VALUE AND MEANING OF THE WASSERMANN REACTION.

BY

E. H. BUTTLES, M. D.

The Wassermann reaction is a laboratory method for the diagnosis of syphilis. It consists of an examination of the blood for the presence of certain substances which have been shown to be present in the great majority of cases during the progress of the disease. What these bodies are is not certain, nor even whether they are of the

nature of antibodies, produced by the body to resist infection, or whether they are products of the metabolism of the spirochete growing upon the body tissues. But whatever their nature, it has been demonstrated conclusively that these substances are usually present in syphilis, and only rarely in any other conditions.

The test itself is a rather complicated one, calling for a well-equipped laboratory, considerable laboratory training, and special experience with this reaction. The reagents used must be made fresh and carefully standardized each time the test is made, calling for a considerable amount of time. The results of each test must be controlled by using a known negative and a known positive serum, thus making sure that the reagents used are satisfactory, yet many opportunities for error occur. Poor laboratory work is always worse than no laboratory work, as tending to produce false confidence and in no examination is this more true than in the Wassermann test. If a proper laboratory is not available for the test, the practitioner had much better depend upon his experience, judgment, and careful clinical observation. This reaction then is outside the province of the medical practitioner, and must so remain, so far as the actual performance of the test is concerned, and but few will care to take the time necessary for an understanding of the methods employed in the test. For such as desire to study the technic of the examination, an excellent description will be found in "Serum Diagnosis of Syphilis," written by Noguchi of the Rockefeller Institute for Medical Research, and published by J. B. Lippincott Company, Philadelphia.

The things about this reaction that should be known to the practicing physician are the value, the meaning and the limitations of the reaction. He should know what reliance to place upon a positive result, how to interpret a negative, when the test should be made, and under what conditions it becomes valueless or inadvisable. He should understand how the reaction is influenced by treatment, and what information the test can give as to the efficiency of his treatment.

Of the original Wassermann reaction there have been several modifications, aiming to simplify the methods or improve the results. The one best known in the United States is the Noguchi modification. Between this and the original test there are but slight differences. The essential

principles are the same, and in laboratories where unprejudiced workers have used both tests in the same cases, results have been almost identical.

The two methods seem of equal value. Other modifications are for the most part short cuts, and are decidedly inferior in reliability.

OCCURRENCE OF THE REACTION.

In syphilitic infection a positive reaction is not usually obtained until three or four weeks after the appearance of the initial lesion, though occasionally it will be present earlier. Hence it is evident that for the early diagnosis of the disease this reaction is of little value, and it is decidedly inferior to the microscopic examination of exudate from the lesion for the presence of the specific organisms. During the secondary stage, the reaction is positive in 90% or over of untreated cases, and here it is of decided value in the diagnosis of suspicious eruptions, throat lesions, etc. In the tertiary stage, with active lesions, the positive findings are nearly as high. In the so-called parasyphilitic conditions and in latent conditions positive results will probably be obtained in about 50 or 60 per cent, of cases. So we may say that, of all untreated cases of syphilis, about 80% will show a positive Wassermann reaction.

Positive reactions have rarely been reported in other conditions, such as scarlatina, leprosy, advanced tuberculosis, and malignant disease, and it is possible that even a normal individual may at times give a weak positive reaction. On the other hand syphilitic patients may show a negative result early in the primary stage, after treatment, during periods of latency, and very rarely the reaction may not be obtained even with the active lesions of the secondary or tertiary stages. Moreover it has been demonstrated that the ingestion of considerable amounts of alcohol will change a positive reaction to a negative for a period of a few days. Nor is it probable that all the limitations of this test are yet known.

Manifestly, then, the Wassermann reaction is not absolute proof of syphilis, nor is a negative result proof of the absence of infection, but the reaction is a symptom, to be weighed and considered with other symptoms and with the history of the case. However, of all symptoms this is probably the most constant, the most enduring, and hence entitled to great consideration. But never, in diagnosis of syphilis, or anything else

should laboratory reports be allowed to outweigh and to supplant the results of careful investigation of clinical appearance and history.

EFFECTS OF TREATMENT ON THE REACTION.

It is generally believed today that the Wassermann test, properly used, furnishes a valuable indicator as to the efficacy of treatment, and it is perhaps true that it is in this field, as a method of controlling treatment, that its greatest value lies. Surely competent and careful physicians have usually been able to diagnose syphilis without the reaction, but just as surely have they been unable to say when the patient was cured of the disease. In the light of our present knowledge and interpretation of this reaction, and from the results obtained from patients treated by the older methods, we are forced to conclude that but a small per cent. of such patients were ever cured of the disease. Lately spirochetes have been demonstrated after autopsy in the brains of a considerable percentage of persons who had paresis, and it is probable that this condition is not a sequence of former syphilitic infection, but is itself syphilis. And so, perhaps with other so-called parasyphilitic conditions.

But the reaction promises to do more than demonstrate the inefficiency of former methods of treatment, for it furnishes valuable information as to when the treatment has been adequate, and when the patient may be pronounced cured. In this way we can in future avoid many of the results of syphilis, such as paresis, tabes, gummata, aneurysms, and the birth of syphilitic children.

It is well-known that slight and ineffectual treatment will often cause a negative reaction—for a short time, but it appears that only after thorough treatment resulting in a cured condition, will a permanent negative be obtained. It has been demonstrated that traces of mercury added to the reagents used in the test will change the strongest positive reaction to a negative, and likewise a syphilitic who has recently been taking mercury, even for a short time, will very likely give a negative reaction, although he may present active lesions. An injection of salvarsan sometimes appears to stir up the organisms to activity, and cause a strong positive reaction persisting for a short time, and followed by a negative reaction which may or may not be permanent according to whether the patient is cured or not.

Results of repeated tests made on patients treated by various methods, together with the clinical observations, have led to the belief that either mercury or salvarsan alone is usually inferior to their combined use, that a single dose of salvarsan will not usually effect a cure, and that many doses may not. It appears that mercurial treatment by mouth is inadequate, that injections are much better, that the earlier a case is treated the easier and more certain is the cure, while the long-standing case may be almost or quite incurable, even though controllable by continued treatment.

As to the use of this reaction in controlling treatment it is advisable to have a Wassermann test made about one month after the cessation of treatment, as a negative result previous to this has little or no value. If the reaction is negative at least two other tests should be made, at intervals of six months or more. Should all the results be negative, and no symptoms appear meanwhile, it is probable that the disease has been eliminated and the patient may be considered cured. But if any of the tests are positive a new course of treatment should be started.

SUMMARY.

1. The Wassermann reaction should be done for and not by the practitioner, who should however be familiar with its value, its interpretation, and its limitations.
2. It is not of value for the very early diagnosis of syphilis.
3. A positive reaction furnishes strong evidence of syphilis, though not an absolute diagnosis.
4. A negative reaction is of less value, and does not prove the absence of syphilis, but is an aid in differential diagnosis of suspicious lesions in untreated cases.
5. The reaction should supplement and never supplant conclusions drawn from careful clinical observation.
6. It is of great value in controlling treatment.

Be sure to cut down the high caloric value of baby's food as the weather gets warmer. How would *you* like to have no change in diet from January to June?

Vermont Medical Monthly.

A Journal of Review, Reform and Progress in the Medical Sciences.

H. C. TINKHAM, M. D., }
B. H. STONE, M. D., } *Editors.*

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EDITORIAL.

The weekly bulletin of the Department of Health of the City of New York of June 14th gives some timely advice to those about to seek the country for the next few months. Attention is called to the fact that a large proportion of the cases of typhoid fever which develop in New York City are contracted in the country during the summer. The writer advises those about to seek rest and recreation in rural communities to pay more attention to their sanitary surroundings and less to the scenery. This advice is proper and will have its effect as it should. The city guest is becoming alive to the dangers of unsanitary surroundings and any community or individual that wishes to encourage this migration which means much pecuniary benefit to the rural New England States and communities, should see to it that the guest finds nothing to complain of in these matters. It must and should be a shock to any city family to come to the country for rest and health, and find, as we regret to say may be still found in many localities, the open privy, the manure pile, breeding myriads of flies which are only ineffectively kept from

kitchen and dining room, and a water supply consisting of the ancient well draining through the sub-soil—these sources of filth. The time has come when any local community or individual householder can not afford from a financial point of view to say nothing of his own health and the health of his family, to drink polluted water or eat food contaminated by the feet of filth-born insects.

MEDICAL PAPERS.

You must admit that physicians are among the most self-sacrificing of human beings, otherwise they would not be physicians. They always give more than they get in return. It must be that they are firmly convinced that their reward will come in heaven. In that case, it is too bad none of their abusers will be there to see the rewards handed out.

One of the most evident demonstrations of the magnanimity of physicians is their willingness, and sometimes eagerness, to relate their experiences to their fellow practitioners. Some of them go to great trouble, discomfort and expense to even tell the unfavorable factors which have arisen in their practice, aiming to have others avoid the pitfalls of inexperience.

Of course the physician who reads a paper before a medical organization or who writes one for a medical journal is not without benefit as a result of his labors. For one thing, he learns the subject at hand more thoroughly than he would ordinarily do. Secondly, occasions may arise where his better acquired knowledge may save the life or welfare of his own patients or those referred to him. Then again if his paper is a worthy one he may become a recognized authority with all the benefactions that follow such cognizance on the part of his fellow men. Also, in the course of preparing a paper one comes across new and interesting channels of thought and fact.

Finally, there is the salutary reaction which follows all achievement.

How, therefore, to give the reader or audience the value which is naturally their due. Above all, don't write about anything of which you have had no personal experience. Merely reciting other men's works is like reading out of a catalogue—besides, being tiresome to your audience, it "gives you dead away" as they say in the vernacular. On the other hand "don't try to put one over" as they also say in the vernacular, on your audience by writing or reading a subject which they know you have never come in any other contact with than by seeing it in some standard text-book or medical journal.

By way of an illustration let me recite this personal experience. I received rather short notice to read a paper relative to brain tumors before a certain medical society. At that time (very early in my career—please) my experience with that variety of affection was limited entirely to hearsay. Not daring to admit the paucity of my knowledge, I thought to put together the works of several writers, draw a few inconsequential conclusions and thus contribute my share to the progress of medical science. I read my paper and felt that I got away with it, for I knew most of the men present at that meeting to be hardworking, genial, general practitioners who applauded anyway and who hadn't the time to bother much about the value of such an obtuse subject as tumors of the brain. Now, that is what I thought. But—as you see, you never can tell—after the meeting one of the gentlemen hailed me, introduced himself and after complimenting me on my paper wondered if I had previously published that article as he was sure he read something like it some time ago. I had hardly begun making explanations to him when another gentleman, whom I knew but slightly, remarked naively, that Dr. D—— (mentioning a famous neurologist) had reached the same con-

clusions as I had some time ago and he urged me to read the doctor's paper. Dr. D.'s paper was one I copied very extensively. In short, the situation grew very embarrassing and I promised myself to never do that stunt again.

A man who writes from experience is always interesting and always useful. Every paper which is written for medical progress should be one that makes additional statistics in the chosen subject. What if rheumatism or pneumonia or typhoid *et al.* are oft repeated and commonplace knowledge, so long as one can add his experience to such knowledge? Have you ever stopped and analyzed your ordinary (!) case of rheumatism?

The analysis of a few of your everyday cases would give you enough food for thought to keep you busy writing extremely long treatises. All would gain by your application to such study and you most of all.

The attitude of a man who reads a paper before a medical society should be that of a professor lecturing to a class of students. In other words, inasmuch as he has consented to teach a body of men a subject which presumably he knows better than the majority of them do, then let him act the part. He should not rush through his theme as if it were an unpleasant duty which he had to perform and was trying to get over it as quickly as possible. If it is any satisfaction to him to know it, he might as well be aware of the attitude of his audience—they feel about it the same way; they want him to get through a good deal sooner.

Let no man select a subject which can not be of some significance to his audience. It is wasting the time of the majority who have to sit through one of these recitals. That isn't saying that there are any subjects in medical lore which are not useful, but medicine is too extensive today to come within the complete scope of all practitioners. The fact of the matter is, that physicians come to meetings *to learn*, and unless

they learn they will not come. Incidentally this condition is one of the most potent factors in reducing the membership of county societies. The members feel that they are not getting much benefit from the papers, consequently they become negligent in attending the meetings. This negligence is followed by nonpayment of dues and cessation of membership.

One of the most uncomfortable afflictions perpetrated on a medical audience is the paper which doubts its own conclusions—that "may or may not be so" paper. If you are in doubt, ask for information but don't venture to give it. Really, every medical society ought to have a "query" department where those who are not sure of their ground, may inquire. Of course we all realize we haven't reached exactitude in many a thing in medicine, but one doesn't come to a meeting to be told that repeatedly.

Use charts and illustrations whenever and wherever possible. You will hold the attention of auditors far better. The reading of a paper appeals to the sense of hearing only. By the use of illustrations the aid of the sense of vision is invoked with obvious benefit. Besides, the exhibition of charts is evidence of time spent in study. We all respect that feature in study.

The business of a medical paper is to teach—the acquisition of the new, the improvement of the old and the avoidance of error. The last is one of the most important factors, and until recently, was one of the most neglected. The confession of error is the first step in the endeavor for improvement. There is a very anxious and highly appreciative multitude awaiting the paper that will be written on his errors only, by the man whose standing in the profession is high.

The use of pathologic data in the interpretation of clinical phenomena is very often neglected to the great detriment of the particular study. The clinician who does not understand pathology can not learn it too soon. He has no effective mes-

sage to bring who does not tell the why and wherefore of disease manifestations.

The great humanitarian fundament of all medical practice—the mitigation of suffering—should be the most constant theme of all writers. The race is far from being perfect, avoidable deaths still occur, unnecessary suffering has not yet been eradicated. It should be the duty therefore of medical teachers to tell their personal experiences either in corroboration or comparison with other observers. Incidentally it is obviously unjust to one's professional brethren to repeat as one's own, those experiences which have already been described by others. A rare disease process is made to appear as if of more frequent occurrence when several men describe the same patient. It is bad policy. Study the literature.

BARNET JOSEPH.

NEWS ITEMS.

Dr. J. L. Lacasse of Manchester, N. H., was recently sued for \$10,000 for alleged negligence in treating a boy's leg for osteomyelitis. The jury returned a verdict for \$750 after an all night session. The doctor was insured.

In Manchester, N. H., there are seven damage suits pending against doctors.

Dr. Harmon Howe of Hartford, Conn. who was killed in the recent railroad accident at Stamford, Conn., was born in Jericho, Vt., in 1850 and was a graduate of the University of Vermont. Dr. Howe was one of the most prominent physicians of Hartford.

Dr. Winfield S. Smith of Brookline, Mass., was recently sued by a husband and wife of New York for alleged unskilful treatment of the wife's broken leg. The verdict was for the doctor in both suits. Mrs. Andrews in her suit claimed that the doctor's treatment of her leg caused it to ulcerate, become shortened and useless.

Dr. Clarence E. Dunbar, Dartmouth 1912, has located in Manchester, N. H., his home town. He was married recently to Miss Carrie R. MacDonald of Manchester, N. H.

Dr. John Morgan, a Back Bay, Boston, eye specialist is being sued for \$10,000 by a patient named Ray. Ray says Dr. Morgan performed an operation on one of his eyes on April 5th, 1911. He says the doctor agreed to remove a cataract from it for \$50, and got his money, but did the work so carelessly and negligently he alleges, that the eye had to be removed to save the sight of the other one.

Warrants have been issued for four professors and surgeons of the medical department of the University of Pennsylvania. The professors must appear before a city magistrate in Philadelphia to answer to the charge of vivisection and cruelly treating animals. The professors who were arrested are Dr. Allen John Smith, former dean of the medical school; Dr. Edward Tyson Reichert, professor of physiology; Dr. Alonzo E. Taylor, professor of chemistry and Dr. Richard M. Pearce, professor of research medicine. Dr. J. E. Sweet was arrested a few days ago on the same charge and held in \$400 bail.

The Maine Medical Association held its sixty-first annual meeting at Portland, July 2nd and 3rd.

The Vermont State Pharmaceutical Association held its twentieth annual meeting at Brandon, June 23rd to 25th.

At the Minneapolis meeting of the American Medical Association, Dr. Victor C. Vaughan was elected president for the ensuing year. Dr. Vaughan's work in the line of physiological and pathological chemistry makes him well known all over the world. Since 1890 he has been dean of the University of Michigan Medical Department.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

TONSILLECTOMY UNDER LOCAL ANESTHESIA.

BRYAN DEFOREST SHEEDY, M. D., of New York, in a paper read at the Minneapolis meeting of the A. M. A., says in part in discussing the subject of "Tonsillectomy Under Local Anesthesia":

All of the one hundred cases reported upon by the reader of the paper were examined several months after operation and no patient under fourteen years of age was operated upon under local anesthesia. There was no grouping of the patients examined as

to whether the throat conditions were the result of operation under local or general anesthesia. The enucleation of the tonsils had been performed by some one of the many methods in vogue for the last few years for the complete removal of the gland and as the operations were performed in practically all the public institutions in New York City, many men of prominence in laryngology were the operators, so that the results could not be attributed to poor technique on the part of one man.

The writer arrived at the conclusion that tonsillectomy so far as removing pathological tonsils is concerned, is a better operation than the old time tonsillotomy, but pointed out that many of the throat defects following the operation of enucleation are due to clumsy and non-surgical technique.

The writer also pointed out the normal relation of the surrounding parts to the tonsil and put up a strong argument against the use of sharp instruments for the dissection of the tonsil from its bed, that being the cause of injury to the muscles with resulting deformities.

Of the one hundred cases examined months after operation more than 80% of the patients had deformed throats. The 20% of patients, with what appeared to be normal throats following the operation, were inconvenienced in no way at any time following the operation. Of the eighty patients, thirty-four complained of speech defects for from one to three weeks after operation, sixteen complained of speech defects for more than three months after operation, while four had practically lost the singing voice. About 25% of the patients stated that their throats felt better and that they could speak and sing better after operation than before. Inability to use certain words had continued with 5% of the patients for more than six months after operation.

The variety of deformities following enucleation were classified as follows:

(1) The pillars on both sides had disappeared with the soft palate tightened to such an extent that the opening at the naso-pharynx was narrowed.

(2) The pillars on both sides had grown together.

(3) The anterior pillar had wholly disappeared with a large amount of cicatricial tissue deposited on the posterior pillar.

In the four patients whose singing voice had been seriously affected the posterior pillar had disappeared through amalgamation with the anterior or with the lateral wall of the pharynx.

The reader emphasized the fact that he did not think the last word had been said in regard to tonsil enucleation and proposed as a remedy for preventing the unsatisfactory throat results an operation for removing the tonsil by what he called the "Eversion Method" and with charts and diagrams pointed out that the capsule of the tonsil is simply a bag, the bottom of which may be pulled through its mouth so that its inner surface becomes the outer and that if the capsule with its glandular tissue is everted and a snare placed on, removing the tonsil with its capsule complete (there being no dissection and therefore no injury to the muscles surrounding) there would be no deformities.

The exceptions to the rule presented, viz.: that the tonsil will evert on traction, were:

(1) Those cases in which the capsule was bound down to the surrounding tissues by previous attacks of inflammation.

(2) Those cases where the capsule was very much contracted and contained cicatricial tissue only.

(3) Those cases of hypertrophied tonsils which had everted themselves and the tonsil was found everted when the patient applied for treatment.

The points advanced in favor of the procedure were:

- (1) Simplicity of the operation.
- (2) Practically no hemorrhage.
- (3) Little or no deformity following the procedure.

(4) Only three instruments necessary for the operation, viz.: tonsil tenaculum, blunt pointed tonsil knife, Tyding snare.

TYPHUS.

J. F. ANDERSON, Washington, D. C. (*Journal A. M. A.*, June 14), gives a review of the history and literature of the so-called Brill's disease and its identification with typhus fever. This shows that the assertion made by Anderson and Goldberger early in 1912, that typhus is actually present at all times in certain large cities of the United States, has been verified and that the disease is even more widespread. Taking the ratio given by Roger Lee that one in forty-seven cases of continued fever lasting over seven days in the Massachusetts General Hospital, was typhus as applying also to other large cities of the country, Anderson gives the probable number of cases occurring in New York, Baltimore, Chicago, Philadelphia and Washington and supports these estimates by certain hospital figures in these cities. It is probable that there have been as many unrecognized cases as cases diagnosed and that the disease is even more widespread than the figures would indicate. While the disease as generally observed has had a low case mortality and no great tendency to spread, there is a possibility of its becoming virulent and epidemic, which must be considered. Guinea-pigs are quite susceptible to typhus when inoculated intraperitoneally with blood of patients in the active febrile stage and he suggests as a means of collecting more accurate data the use of such inoculations from blood of patients with continued fever giving a negative Widal and blood-culture; especially in cases of sudden onset, atypical eruption, intense headache, apathy and prostration. He believes that such methods would prove, if carried out, that typhus is more prevalent in our large cities than has heretofore been generally believed.

OPERATING-ROOM LIGHT.

W. BARTLETT, St. Louis (*Journal A. M. A.*, June 14), supplements his former paper (*Ann. Surg.*, January, 1913, p. 124), in which he told of the satisfactory results of the use of several automobile lights on the field of illumination, by a description of the method he has employed in utilizing the ordinary street-lighting current for the same purpose. The common incandescent bulb of light candle power has a vastly shorter filament than the automobile light and requires an entirely different reflector to focus its rays as desired. He describes and illus-

trates the methods in which he has overcome the difficulties and his figures give a better idea of the appearance and working of the apparatus than can a verbal description. Two sets are in use in the Mayo clinic at Rochester at the present time.

HOSPITAL OPERATING-ROOMS.

An arrangement of an operating-room affording accommodations for visitors and students is illustrated and described by J. R. McDILL, Milwaukee (*Journal A. M. A.*, June 14), who says that clinical surgeons "owe to their results, as well as to their students, visitors and guests, facilities for observing their work that do not conflict or interfere with the operating-room technic," and this idea should be kept in mind in the planning of new hospitals or adding to or renovation of older ones. There should be no friction of any sort in the coming and going of those admitted and "this can be accomplished by a separate and preferably outside entrance and exit for all not connected with the hospital. This entrance and exit should lead into a room provided with closet and lavatory conveniences, which serves as a cloak-room and lounging room; this room should connect with the space reserved for spectators, and each of these spaces should connect with every other operating-room in the building by bridges or galleries several feet above the operating-room floor and stairs to those below or above. The seating arrangements for these amphitheaters should never resemble the old type; each visitor up to 100 ought to be provided with a seat from six to twenty-five feet from the operating-table." The plan illustrated is that of the operating-pavilion of the Philippine General Hospital at Manila, drawn by Wm. E. Parsons, consulting architect, under Dr. McDill's direction.

FRACTURE TABLE.

G. W. HAWLEY, Bridgeport, Conn. (*Journal A. M. A.*, June 14), describes a fracture and orthopedic table devised by himself to provide for suspension and immobilization of the lower extremities and trunk and to afford reliable support and traction for the lower limbs in the treatment of fracture. The description needs the illustrations, but the author claims the advantage of simplicity. The flat top serves for almost any kind of work and the doing away of lifting patients on a hip-rest, which is difficult without disturbing the position of the extremities, releasing traction and displacing the bones. It also eliminates, he thinks, the need of much of the assistance required in these cases.

CEREBRAL SYPHILIS.

GEORGE S. SCHWINN, Washington, D. C. (*Journal A. M. A.*, June 14), reviews the subject of cerebral syphilis in its various forms with special reference to its prophylaxis by early recognition and treatment. There is too often a favorable prognosis given

on a basis of a specific history or probability. Recovery can be expected only so long as specific changes in the tissues are the only ones present. The most responsive to treatment are cases of meningitis, provided the symptoms point to irritation instead of paralysis. The prognosis runs parallel to the treatment of the nervous involvement, and Schwinn discusses the views and facts in regard to the use of salvarsan combined with mercury and iodid in the treatment of these cases. The use of salvarsan should be employed with the greatest prudence and in syphilis of the brain the possibility of the Herxheimer reaction should be kept in mind. The treatment of syphilis should begin with the primary lesion and should not be limited to the control of symptoms and should be undertaken with the full appreciation of the seriousness of the infection and what is expected from the remedies used. It varies widely in different individuals and no one method can answer for all cases.

THE LUTIN REACTION.

J. M. WOLFSOHN, San Francisco, who, in a former report, demonstrated the importance of the luetin reaction in a second report on the subject (*Journal A. M. A.*, June 14), based on a hundred cases of syphilis, confirms, except in a few details, his former results. Fifty-eight control patients suffering from senile dementia, gastric ulcer, psoriasis, eczema, etc., were tested and only two of them reacted suggestively by slight inflammatory induration disappearing within four days. In eight cases of congenital syphilis with positive Wassermann after salvarsan treatment, the luetin reaction was positive in six or 75 per cent. One case of primary syphilis was tested four days after appearance of the chancre and detection of the spirochete. Both the Wassermann and luetin were negative. In five cases of secondary syphilis with positive Wassermann, only three were positive to the luetin test. Twenty-six of tertiary syphilis were included in the series, twenty-one of which gave positive Wassermann reactions in the blood-serum, and only two out of eleven in the cerebrospinal fluid tested. The luetin test was positive in twenty-five of the twenty-six cases, the one exception being a case of multiple gummata readily diagnosed as specific. It would hardly be expected that the luetin reaction, if dependent on an allergic state of the individual, would be positive in such a case. In sixteen cases of latent syphilis, patients inoculated gave positive Wassermanns for the blood-serum, and only one out of six for the cerebrospinal fluid. In contrast to this, all sixteen reacted positively to the luetin test. In parasyphilitic patients, 88 per cent. gave positive luetin tests in the cardiovascular cases against 64 per cent. of Wassermann's. In eighteen patients with central nervous syphilis the luetin reaction was positive in 94 per cent. In one of the cardiac syphilitic cases a large hemorrhagic pustule appeared at the site of luetin injection and another of suspected syphilitic infection which had had a negative Wassermann test, gave a positive Wassermann after the luetin injection. The author sums up his conclusions as follows: "1. The results of these observations, and also those of all previous workers with the luetin test, substantiate the specificity of the luetin reac-

tion for syphilis when properly performed. 2. Intensive antisyphilitic treatment in the later stages of syphilis may produce a negative luetin reaction which, after an interval in which treatment is withdrawn, may become positive. 3. Treated congenital and secondary syphilis is apt to give positive luetin reactions. 4. The luetin reaction is especially valuable in parasyphilis and tertiary and latent syphilis. 5. In any case of suspected syphilis, whether previously treated or not, a negative luetin reaction must be watched for at least four weeks so as not to overlook a delayed reaction."

ARTIFICIAL AIRWAY.

A modification of Hewitt's artificial airway for anesthesia adapted to the open method of ether administration is described by R. H. FERGUSON, East Orange, N. J. (*Journal A. M. A.*, June 14). For use with the closed or the semiopen method of anesthesia Hewitt's airway, consisting of a somewhat rigid tube with its laryngeal end beveled to correspond to the opening into the larynx and with its outer end a metal funnel-shaped mouthpiece fitted with a groove which permits it to be clutched by the teeth, is complete and satisfactory; but for the open ether method Ferguson does not consider it safe, as it is possible that some ether might find its way into the larynx and lungs. He has modified it, therefore, by having the proximal end of the funnel closed and two openings on the side for the admission of air. Ether, therefore, cannot make its way into the tube, no matter what the position of the patient may be. He has also lengthened the metal thimble into the lumen of the tube so that the patient cannot compress it with his teeth. The airway should be introduced after the surgical anesthesia has been reached and is useful in any anesthesia when, through muscular spasm or improper position of the patient, the epiglottis and the base of the tongue are forced to approximate the pharyngeal wall and thereby embarrass respiration. The article is illustrated.

ANIMAL CANCER.

LEO LOEB and M. S. FLEISHER, St. Louis (*Journal A. M. A.*, June 14), report a continuation of their work on the action of certain substances on carcinoma in mice. First, they investigated the action of some inorganic substances; and secondly, the action of certain albuminous substances and also of a carbohydrate and a lipid. Colloidal copper and colloidal platinum both inhibited the growth of tumors during the injections. Colloidal sulphur, if active at all, is no more so than the above mentioned substances. On the other hand ionized salts of copper and of lanthanum had no effect on cancer. Combinations of proteid substances with copper are active. They also tested one organic substance, according to Morgenroth very active in preventing pneumococcus infection, namely ethylhydrocuprein and found it inactive against cancer. "The following more complicated substances were tested: various preparations of casein and of nucleoprotein; furthermore, serum globulin, horse-serum, egg-albumin, Witte's peptone, protamin, gelatin, lecithin and

starch. Of these various substances only the first two named, casein and nucleoprotein, were effective, while all the other substances were entirely inactive. One single intravenous injection of either of these two substances destroyed, in a large number of cases, a great part of a tumor; while repeated intravenous injections prevented the growth of the tumor during the period of injection. After cessation of the injections the growth started again in the majority of cases, either immediately or after a period of latency." The fact that another entirely different substance, leech extract, also acted on tumor growth like nucleoprotein and casein, but somewhat more strongly, seemed of great interest. It appears, therefore, that of the various proteins, carbohydrates and lipoids so far tested, only the complex phosphorous-containing proteins are active. Of other substances only leech extract is active and among inorganic substances only colloidal metals. Very young tumors seem less easily influenced than those from nine to fourteen days old, intravenous injection only being effective. The authors also investigated the action of some of these substances on experimentally produced placentomas in the rabbit and guinea-pig. They found after the injection of casein some hemorrhages and subsequent necroses. Colloidal copper seemed to be without any effects on placentomas. With Dr. Leighton they examined the effect of casein and colloidal copper on wound-healing in white mice and saw no marked effect. They also injected a series of normal guinea-pigs intravenously with the same solutions tested in tumors and found that a single injection of nucleoprotein, casein, egg-albumin, and protamin frequently caused multiple necroses of the liver. Other substances like gelatin and starch do not seem to have this effect. There is apparently no absolute correspondence between the action of various substances on tumor and on the liver, moreover they have not been able to observe the necroses in the liver of the mouse. The authors think it most probable that the substances found active in cancer of a mouse change the capillaries, increasing their permeability to various constituents of the blood. He had previously reported that intravenous injections of colloidal copper would cause partial retrogression of carcinoma in man in tumor of not too rapid growth. Further experiments in conjunction with Drs. Lyon, McClurg and Sweek showed that intravenous injections of solutions of casein also inhibited the growth in certain human cancers, and in one case of sarcoma of the humerus in man casein injection caused decided retrogression and partial calcification of the growth. Nevertheless, on account of the liver necroses observed in the guinea-pig after casein injections they suggest that it may be inadvisable to make use of such proteins in human beings at present.

GASTRIC DILATATION.

ANDERS FRICK, Chicago (*Journal A. M. A.*, June 14), objects to the common recognition of a first and a second degree of gastric dilatation, understanding by the latter a permanent condition, on the grounds that the distinction is of very little practical value and is actually dangerous inasmuch as it implies a

degree that has no tendency to self-cure. This is, he holds, a condition that does not exist and, if we realize this fact, we will have more satisfactory results in the treatment. It will simplify the question of lavage in gastric dilatation and of operations. He reports six cases illustrating his views and says: "1. A dilated stomach retains its contractility wonderfully well no matter for how long a time or to what degree it has been dilated. 2. The chief purpose of the treatment of a gastric dilatation should be to give the dilated stomach every possible opportunity to contract. This purpose is best accomplished by the removal of gastric contents, starvation and rest in bed. 3. These three therapeutic measures should be considered a distinct method of treating gastric dilatation, indicated as soon as a diagnosis of dilatation has been made, just as the starvation-cure is considered a method of treating gastric ulcer. 4. This method is indicated as a preparatory treatment in those cases of gastric dilatation in which a gastro-enterostomy is to be made on account of the cause which has led to dilatation, as under such treatment the stomach will contract as far as possible and an eventual continuous gastric secretion will cease. 5. Intragastric or extragastric electricity, massage, cold compresses or other hydrotherapeutic measures, abdominal supporters, rectal feeding, strychnin, antiseptic drugs and alkalies are valuable auxiliary remedies which are not strictly necessary for the treatment of gastric dilatation."

SIGNIFICANT DIAGNOSTIC SIGNS.

H. W. EMSHEIMER, New York (*Journal A. M. A.*, June 14), calls attention to certain symptoms or signs which are at all times significant and the importance of which may escape our notice in the multiplicity of other symptoms. He thinks that many mistakes in diagnosis would be avoided if the special significance of these symptoms were always appreciated. The success of the apparent "snap" diagnosis of some old and experienced practitioners is due to just this appreciation. It is this ability to grasp the essential details of the syndrome that makes them so often more successful in diagnosis than the more laborious investigator. One definite sign is of far greater value than many uncertain ones and the possible neglect of this essential truth is what he wishes to emphasize. He reports a number of cases which he thinks illustrate this view. Such as a case of ruptured gastric ulcer in which hematemesis settled the diagnosis; another of osteomyelitis of the spine detected at post-mortem of which the only characteristic sign was a temporary local tenderness at the diseased point, while the general symptoms were those of cerebrospinal meningitis. Experience in this case aided in the correct diagnosis of another. Cases are also reported of renal calculus, the only symptom of which was blood in the urine; cerebrospinal meningitis with symptoms of acute infectious disease, a scanty rash only indicating the true diagnosis, etc. Many more cases, he says, could be cited, but these are sufficient to illustrate the utmost diagnostic importance of certain specially significant diagnostic points among a multitude of other misleading ones.

OCULAR FINDINGS AND LONGEVITY.

W. G. POSEY, Philadelphia (*Journal A. M. A.*, June 14), remarks that it seems extraordinary that life insurance examiners do not oftener avail themselves of the aid given by eye examination as regards the indications of the existence of important morbid processes in the body. To determine the existence of a disease, he says, is one thing; but to draw deductions from one's ophthalmic findings regarding the life expectation of the individual is another. He, therefore, confines himself to the discussion of this point how far the morbid processes in the eye, symptomatic of disease elsewhere, enable one to draw conclusions as to the stage of advancement of that disease and to estimate the probable duration of life. He thinks it safe to assert that marked ocular disturbance from diseases elsewhere in the body indicates a development seriously threatening health and life. The discovery of hemorrhages in the retina, for example, when not of traumatic origin, in any adult should always be considered as indicating a serious condition. As these occur usually in nephritis, he first takes up the ophthalmic findings in Bright's disease and gives the figures which can be deduced from the reported studies as regards their significance as to duration of life. The figures are certainly unfavorable and death may be expected from one to three years in albuminuric retinitis. He agrees, however, with de Schweinitz that it is not unlikely that further statistics will show some improvement. A carefully regulated manner of living with the best of medical care may prolong life for many years. Of almost equal value to the examiner is the recognition of the ocular symptoms of diabetes which are many and varied. The most important are the changes in the ciliary muscle, the lens and the retina, which not infrequently are the first recognized symptoms of diabetes mellitus. The authorities differ as to the frequency of ocular symptoms in this disease and perhaps Hirschberg's statistics are most trustworthy. He found diabetes present in from one to two per cent. of all his private cases and in a smaller per cent. in his hospital practice. Opinions differ also as to the vital prognosis, some authorities being pessimistic. According to Posey's experience, with proper care diabetics may live many years after the development of ocular lesions and these may sometimes improve. Diabetic cataract is the one form of cataract that yields in any degree to inoperative measures. The ophthalmoscope may also give valuable indications in the retinal circulation, both as regards the conditions of the heart and also of the prospects of life. Lead, tobacco and alcohol often reveal their defects in the fundus oculi, and syphilis can affect almost all the eye structures. Tuberculosis has also its eye symptoms. The earliest symptoms of paresis are often ocular and may be of the greatest value in diagnosis. Aside from the question of life expectation, Posey thinks insurance examiners should give more attention to the degree of visual acuity as affecting the man's capacity for work. Even partial loss of sight may affect a man's earning capacity and the probability of a man's being able to pay his premiums. Defective sight frequently keeps people below the place where their abilities should place them and, while some are not crippled by it, insurance companies probably wish to be guided by the possibilities of the average man.

SEXUAL NEURASTHENIA IN MEN.

The following are the conclusions of an article on primary sexual neurasthenia in males not dependable on the central and sympathetic nervous systems, by A. J. UNDERHILL, Baltimore (*Journal A. M. A.*, June 14). He reports six illustrative cases in detail. 1. Sexual neurasthenia is always due to definite pathologic conditions in the genito-urinary tract. 2. The lesions may be situated in any part of this tract. 3. Because of the exceptionally rich supply of sensory nerve-endings in the prostatic urethra, the changes in this part, especially in the vicinity of the verumontanum, are most apt to give rise to this type of neurasthenia. 4. The conditions give rise primarily to a local neuritis or neuralgia which is the intermediate cause of the neurasthenia. 5. There may be in certain instances a toxic element which reduces the resistance of the sympathetic nervous system. This is especially true of infections of the seminal vesicles or prostate. 6. The condition is most apt to occur in those of hereditary or acquired neuropathic disposition. 7. The physical impotence resulting in many of these cases acquires a psychic element in the course of the disease which must be dealt with as a separate entity after the removal of the primary cause.

DIPHTHERIA CARRIERS.

A. M. ALDEN, Iowa City (*Journal A. M. A.*, June 14), says that according to the experience of the Iowa health board, the average duration of the presence of the diphtheria bacillus after recovery in virulent cases is about sixteen days, but they have many cases in which it is much longer in spite of all local treatment. They have employed the staphylococcus spray treatment and give the results in the first sixteen cases. These have led the State Board of Health to decide to use it in all cases of persistent carriers. The culture used by them was a composite one made by mixing three equal portions of three different strains of *Staphylococcus pyogenes aureus* isolated from throat cultures. It seems to be more thorough than other applications in these cases. In all but one of the sixteen cases, a negative culture was obtained within a week after the beginning of the treatment, and the failure in that one is accounted for as possibly due to imperfect application or inactivity of the culture. They think the following conclusions are warranted: "1. No patient having had diphtheria should be released from quarantine until at least two consecutive negative cultures are obtained from both nose and throat, and ear if symptoms are present. 2. Antitoxin will not free the patient from carrier condition, but some local application is necessary to rid the throat and nasal passages of *B. diphtheriae*. 3. In fifteen out of sixteen cases the staphylococcus spray effectively cleared the throat of *B. diphtheriae* after other methods had failed. 4. Apparently no harm results to the patient from the use of the spray."

TEACHING OF PSYCHIATRY.

H. DOUGLAS SINGER, of the Illinois State Psychopathic Institute, Kankakee (*Journal A. M. A.*, June 14), takes issue, sharply, with the stand of Drs.

Burr and Dercum on the teaching of psychiatry. Averring that they express extreme views in making wholesale condemnation of psychology the chief feature of their argument, he criticizes their attitude and says the need for training of the medical student in this important branch of medicine is constantly receiving more attention and recognition. Before this topic is introduced into the curriculum he considers it all important that due consideration be given to outlining the course of instruction. While denying that he or any one else has suggested that the doctrines of Freud be taught to medical students, he acknowledges that in the conceptions of the latter there are "certain broad principles which are well founded in fact and that are not in any way invalidated by the application he makes of them." He further concedes that the Freudian school has done much to crystallize and clarify present-day views on a biologic basis, albeit only study and discussion may have resulted. He maintains that it is as impossible to teach psychiatry (abnormal cerebral functioning) without a basis of psychology (normal cerebral functioning) as it is to teach pathology without knowledge of physiology. Replying to the charge that there is too great a tendency at present toward speculative psychology, it seems to him equally unfortunate that there should be also such a tendency to speculative pathology. He would avoid speculative relations to internal medicine as much as to speculative psychology. That a majority of dementia praecox patients die of tuberculosis is flatly disputed and the assertion made that if such were the case, there would be no need for huge hospitals for the insane, the vast majority of whose inmates are in the terminal stages of dementia praecox. It is absolutely essential, from the author's viewpoint, that the insanities be studied as disorders of adjustment as well as in their relations to internal medicine, if any grasp is to be obtained of what the individual cases mean. In other words, they must be studied as psychologic, as well as pathologic problems. Concluding, he insists that the broad principles of the newer biologic psychology are essential to and part of the study of even elementary psychiatry, and without them the teaching of mental disorders must remain hopelessly chaotic, unintelligible and of little account.

THROMBOSIS.

T. WILLETT and E. W. MAECHTLE, West Allis, Wis. (*Journal A. M. A.*, June 14), report a case of thrombosis of the inferior vena cava in which the patient recovered by the establishment of collateral circulation. The symptoms suggesting abdominal trouble, pain, tender and enlarged kidney, pseudorigidity on the right side and a palpable smooth mass in the right ileolumbar region caused a tentative suggestion of right perineal abscess and an exploratory operation was made. Behind the kidney an elongated tubular regular hard structure was found on examination to be the inferior vena cava completely thrombosed from its bifurcation into the iliac veins to its passage through the diaphragm. In a few weeks collateral circulation had become reestablished and the patient is up and about with apparently complete compensation and no discomfort except a

slight swelling of the feet after long standing. The authors claim no credit for the recovery and very little for the diagnosis, which they admit they realize was the result of unusually favorable circumstances.

AUTOPSIES IN THE UNITED STATES.

We all knew that we were much behind the leading European countries in the matter of necropsies, but we never knew exactly the extent of our backwardness. The report of the Public Health, Hospital, and Budget Committee of the New York Academy of Medicine on Post-Mortem Examinations in the United States, just made public, contains figures which should give us cause for thought. Bellevue Hospital, with its average of 3,000 deaths annually, has an average of 300 autopsies a year. The Boston City Hospital had 100 autopsies for the 1,611 cases which terminated fatally in that hospital in 1912, and the Philadelphia General Hospital held 196 post-mortem examinations on the 1,749 dead in 1912. Some of the smaller institutions fare, relatively, a little better, but the proportion of our hospital cases which come to autopsy is ludicrously small in comparison with foreign hospitals, and our figures show a disquieting tendency to decrease. While the Montreal General Hospital shows a proportion of eighty-six per cent., University College Hospital, of London, eighty-four; Charité Hospital, of Berlin, ninety-two; and the Allgemeine Krankenhaus, of Vienna, ninety-nine, the proportion of cases which come to autopsy in our largest hospitals is about ten per cent. In some instances it falls as low as six and five per cent. How under such circumstances can we expect to advance medicine and to teach physicians is a question that very vitally concerns not only the profession but the general public (if not primarily) as well. The public wants good and reliable physicians, but is unwilling to provide for their education, or, rather, is ignorant of the real needs of proper medical education. And we are to be blamed for their ignorance; we have not taken the trouble of educating them. Of the five causes responsible for the small number of autopsies in this country mentioned in the report of the Public Health, Hospital, and Budget Committee, adverse public opinion and existing prejudices are the most important. These can be overcome, partially at

least, by a process of education and appeal to the common sense of the people. A great many people do not know the difference between an autopsy and an anatomical dissection. They object to an autopsy because they think that it entails a complete taking apart and disfigurement of the body. Neither do our laws differentiate between an autopsy and a dissection, and this is responsible for a great deal of confusion and many difficulties. A modern law should clearly recognize this difference and should also relieve the hospitals from the irksome duty of obtaining permissions for autopsies. It should be left to the friends and relatives of the deceased to object to an autopsy, if they so desire; but in case there be no objection within, say, twenty-four hours after notification of death, the body should automatically come to an autopsy. Under such arrangements, practised everywhere on the Continent and in England, there will be no injustice done to anybody and a great gain will be secured to medical science and education.—*N. Y. Medical Journal*.

RULES FOR MENTAL HYGIENE.

The Massachusetts Society for Mental Hygiene, which held a conference in Boston, March 31st to April 4th, printed in connection with its announcements of the meetings the following suggestions for the protection of mental health, which were reprinted in the *Monthly Bulletin of the New York State Department of Health*, April, 1913.

Only the mentally and physically fit should beget and bear children. The marriage of closely related persons should be avoided. Children of grossly intemperate parents are liable to be imbecile or epileptic, and may inherit a nervous system unable to cope successfully with the conditions of our complex civilization. Children of feeble minded, imbecile, or epileptic parents are liable to be feeble minded, imbecile, or epileptic—almost certainly, if both parents are defective. Children of parents, one of whom is or has been insane, are liable to inherit a constitution that tends to insanity; and many, though apparently normal, transmit to their children this predisposition; the liability is greater if both parents are or have been thus affected.

Train your child to thorough cleanliness both of mind and body. Bad companions as well as common towels, common drinking cups, and the like should be avoided because there is danger of contagion, both physical and mental. Give your child a variety of well cooked wholesome food in ample quantity at regular intervals. Train your child to healthful habits of sleep in fresh air, giving opportunity for at least nine hours, and for more than that before the age of twelve.

Avoid conditions that tend to produce overstrain or precocity. The special business of a young child is to grow and to play with other children. Give your child opportunity for a variety of wholesome activities and interests. Train your child to work hard in some regular occupation suited to his ability and talents, but to avoid extreme fatigue by alternation of work and rest. Train your child to give attention to the present situation and not to worry about the past or the future. Train your child to strict obedience in a few important matters and let him alone in regard to other things. Train your child to avoid drugs and stimulants of all kinds. Protect your child from shocks. Do not frighten him yourself or let other people do so. If your child becomes worried and sleepless or has muscular twitchings or the like, consult a competent physician at once. The best method of training is example; and what is good for your child is usually good for you.

Take advice of a competent person concerning the peculiar sensitive, or nervous child, in order to correct a possibly bad inheritance by proper education and environment. The intemperate use of alcohol is a contributing or causative factor of several forms of insanity in the individual predisposed thereto. The habitual use of the habit forming drugs, especially those of the sedative and hypnotic type, may cause delirium or insanity.

Remembering that syphilis, typhoid fever, scarlet fever, measles, tuberculosis, influenza, heart, kidney, and other diseases are not infrequently contributing factors in insanity or mental and nervous breakdown, it behooves you to see that the health regulations of your community are kept abreast of modern standards of efficiency and to seek early a physician's advice when illness invades your home. A contagious and infectious germ disease known as syphilis is the direct cause of three kinds of brain disease, which

represents at least one-tenth of the admissions to insane hospitals. Most of them are characterized by a progressive failure of mind and body, which ends in death in a few years. Syphilis has other ill effects on the individual and may be transmitted to the next generation. Most cases of insanity caused by syphilis are incurable by any means now known to medical science. Do not allow diffidence or similar feelings to prevent you from promptly seeking competent medical advice concerning sexual, ethical, emotional, or mental problems which perplex you.

Remember that the mental equilibrium of many persons is endangered by the high pressure of our twentieth century civilization—be thoughtful of them. Try to get a little recreation every day, and a vacation oftener than once a year. Try to keep your weight up to that regarded as "standard" for your height. Cultivate a cheerful, generous, and charitable disposition. There are many forms of insanity; a large percentage is preventable, and a considerable proportion curable. Observe the few well established and simple rules of health concerning food, sleep, exercise, bathing, and recreation. Avoid alcohol, drugs, immoral living, venereal diseases, great mental or physical stress, and excesses of all kinds. Be temperate in all things.—*N. Y. Medical Journal*.

RADIUM IN THE UNITED STATES.

The application of radium in the domain of medicine and the possibilities of its ultimate efficiency in the treatment of disease are still too little understood to permit of any generalizations or unchallenged statements in respect to radio-therapy. The readiness with which the quack and nostrum faker have adopted the unproved virtues of radio-activity in the prosecution of their lucrative nefarious practices is familiar to all. Despite this misuse of the newer contributions of chemistry it must be admitted that radium with its unknown possibilities as well as its marvelous properties has entered into both medical thinking and doing in a way that cannot be overlooked. The alleged potency of the element is only exceeded by its actual price.

Radium institutes have been established in Austria, France, Germany and England; yet few

persons are cognizant of the fact that the United States has radium-producing deposits within her borders and has taken the palm from Austria as the radium-producing country of the world. The experts of the Bureau of Mines have lately revealed a situation in respect to this unusually valuable element which leads to the rather surprising conclusion that while all the radium placed on the market in the last few years has been produced in Europe, a large portion of this output has come from American ores. Carnotite and pitchblende are the uranium minerals which carry the radium. Practically the total American output of pitchblende, the richest of these, has come from the mines in Gilpin County, Colorado. Pitchblende of the highest grade was sent out the country at a time when the world's radium output was supposed to be coming from Austrian ores. Parsons has pointed out that while the Austrian government, realizing the untold possibilities of the radium ores of St. Joachimsthal, has purchased the mines, put their output under direct governmental supervision, and entered into an arrangement whereby this ore is worked up in cooperation with the Vienna Academy of Sciences for experimental purposes in a carefully administered radium institute, America has allowed her much more extensive resources to be exploited on a basis which wastes perhaps irretrievably a large portion of the material mined, and has exported carefully selected ores at a price by no means commensurate with their radium value if worked up at home. At least 20 or 25 tons of high-grade pitchblende have already been sent out of the country.

Of late the foreigners have realized the value of our carnotite resources. This mineral, which always carries vanadium as well as uranium and radium, is purchased almost wholly for the radium which it contains. The more important deposits are scattered over a considerable area in Colorado and Utah. The U. S. Bureau of Mines has discovered that these ores are being shipped abroad in some quantity.

Bearing in mind that practically every ton of radium-yielding ore mined in 1912 went abroad, that the American deposits are by no means inexhaustible, that we are rapidly depleting our reserve and shipping away material of great value and unknown possibilities which cannot be replaced, that the present market value of radium is about \$2,250,000 an ounce; that the American

medical fraternity has been compelled to procure from abroad such radium as individuals or hospitals could afford, and that the study of the possible application of radium in a therapeutic way has been hampered greatly by its almost prohibitive price, we must welcome an investigation of the situation by American authorities, says *The Journal of the American Medical Association*. Scarcely any one has taken up the extraction and refining of radium in this country—the very place where carnotite ores that cannot find a market in Europe are today being thrown on the dump and wasted. Perhaps when the days of conservation of our natural resources at length arrive we shall be glad to concentrate and conserve what our foreign friends once rejected when they were exploiting the treasures to which we ourselves were blind.—*Jour. of the Am. Med. Ass'n.*

HOUSING AND HEALTH.

In much of the current discussion of housing and city-planning the need of a basis of observed fact is apparent. A recent analysis by Chalmers, the medical officer of Glasgow, of conditions in Glasgow is an important contribution to the difficult problem of the relation of house-room to death-rate. An examination of the age distribution of the population of Glasgow showed that a considerable proportion of the difference in the death-rate recorded for dwellings of various sizes could be ascribed to the large number of children in the smaller houses. The number of children under 5 years constituted 19 per cent. of the total population living in one-room houses, 14 per cent. in two-room, 7 per cent. in three-room and only 4 per cent. in houses of four rooms and upwards. Further analysis, however, showed that simple differences in age distribution would not explain altogether the differences in death-rate in houses of various sizes. Assuming a standard age and sex distribution, it was found that a population of 100,000 with the Glasgow death-rate would yield 2,024 deaths annually in one-room houses, 1,683 in two-room, 1,263 in three-room and 1,032 in houses of four or more rooms, while in institutions the deaths would number 3,649. With regard to the causes of death the problem becomes very complex. In

infectious diseases, including pneumonia, the higher rate fell on the smaller houses. Diseases of the nervous system in adults, on the other hand, were apparently more prevalent among the inhabitants of the larger houses. Chalmers regards the evidence as showing that the children born in the smaller houses are from the start under a serious physical handicap which is related to some extent to the food-supply. This could be traced to the prevalence in this group of various forms of disease of the digestive organs. "In later life the influence of the birth surroundings did not wholly disappear, but these were obscured by the influences of adult life, which, as in the case of diseases of the nervous system, tended to become degenerative in type, and appeared more frequently among the occupants of houses of larger size." Whether or not these particular conclusions are found to be generally valid, it will be recognized, says *The Journal of the American Medical Association*, that the careful scrutiny and statistical analysis on which they are based is the only method likely to lead to permanent results. In a word, it is not a simple task to determine the influence of housing on health. Comparison of death-rates without reference to age, sex, race or economic condition may be quite misleading.—*Jour. of the Am. Med. Ass'n.*

PURE FOOD WELL COOKED.

There is some truth in the assertion that neither states' rights nor slavery, but the frying-pan, brought on the Civil War, for frying encapsulated the food in a layer of fat impervious to the digestive juices, and the resulting indigestion aroused the mutual enmities and the berserker rage of our fathers. America is preeminently the land of the deadly hot bread, the sinker, the flapjack, the Bingo frankfurter, the quick lunch, dyspepsia, with its consequent neurasthenia, and the stomach bitters, which often approximate whisky in alcohol content. It would not be difficult to prove that "bad cooking has driven many a man to drink." Not only are our meats often badly cooked, but also vegetables are frequently boiled in a way which deprives them of their characteristic odor and their toothsome-ness. We make other dietetic errors when we sugar our

salads and salt our fruits. There would seem to be among our people, in larger measure than elsewhere in civilization, a contempt for the culinary art, as if it were beneath notice, or decadent, or savoring of the effete old world. Yet what in life can be more essential than the right preparation of substances which are to keep the human machinery going, in order that the best may be got out of it, with fewest slowings down or interruptions?

In the Old World the relation of zest and fragrance to food is held vital, and justly so. Great Europeans, indeed, have seriously interested themselves in such matters. It is a dictum on the Continent that the *saucier* is born, not made. On numerous occasions the elder Dumas invited friends to dinner, personally prepared the most succulent dishes, and then, exchanging his cook's attire for his dress clothes, regaled his cronies with the products of his "noble art." Montaigne wrote a notable book on the science of cooking. Frederick the Great praised his cook in verse—the former being much better than the latter. Lord Bacon thought it no shame to bend his mighty intellect to the problems of the kitchen. The composer Rossini composed salads as symphonic in their way as his operas, and regretted that by reason of his neglected early education he could not have made cooking, rather than music, his profession. In Brillat-Savarin's great work, "The Physiology of Taste," are axioms as profound—at least as entertaining—as ever Plato or Epictetus set down. For example:

"The education of the tastes and the appetite should be an index of the degree of civilization."

"Digestion, of all bodily functions, has most influence on the morals of the individual."

"A good dinner is but little dearer than a bad one."

"The most momentous decisions of personal and of material life are made at table."

"The fate of nations depends on how they are fed."

"The man of sense and culture alone understands eating."

"The discovery of a new dish does more for the happiness of the human race than the discovery of a planet."

Louis XVIII invented a famous dish—which is perhaps the best thing he ever did for his people. The Prince of Condé won international

fame as the inventor of an improved bean soup. Richelieu, Colbert and Mazarin were celebrated for like achievements.

It does not follow that, in emulation, our chief magistrate should add to his already illustrious services by donning an apron and inventing an entirely original *sauce princetonnaise*; or that our genial Secretary of State should aid our visitors from foreign courts to forget the episode of the unfermented grape-juice, by evolving for their delectation a *consommé à la Commoner*. But our fellow citizens and their better nintenths, and our doctors, and most emphatically our nurses, ought to make pure food well cooked a matter of serious national import. The only animal which cooks its food is man, and this is a badge of distinction from the brute. We cook food for at least four reasons: to sterilize it, to make it nutritious, to render it more easily digestible, and to improve or vary its flavor. The last of these, in the opinion of *The Journal of the American Medical Association*, is at least as important as any of the others. When the gustatory nerves tingle in response to the stimulus of some rare condiment or aroma, the saliva flows in joyous excitement, and the digestive juices, by whose benign influences food is transformed into nourishment, respond in salutary and fullest measure. The simplest and pleasant way to bring this about is to pay proper attention to the flavor of food.—*Jour. of the Am. Med. Ass'n*.

HEALTH, HYGIENE AND HAUNTED HOUSES.

It is by no means a new experience to find the miracles of ancient days and the mysteries of occult arts fading away in the light of modern science. The bloody bread of the Middle Ages, for example, with its sinister forebodings and religious implications, has today become a simple demonstration in bacteriology. Unexpected luminous surfaces appearing in the absence of any visible source of light are easily explained by any student of the biology of phosphorescence. Even the almost impenetrable marvels of the active mind as well as those curious manifestations, like hypnotism, which pass under the name of psychic phenomena are yielding to the attempts at a rational interpretation. Weird visions and strange ghosts have at length become

the expressions of a disordered mind rather than the visitations of an offended deity. And now the "haunted" house—chronicled in fiction and actually shunned in real life—has been deprived of its mystifying wonders and frightful horrors by the findings of twentieth century hygiene.

Dr. Franz Schneider, Jr., of the Massachusetts Institute of Technology, has investigated a house in the Back Bay district of Boston which had acquired the annoying reputation of being "haunted." The experiences which led to the investigation were too serious, the symptoms too real, the reports too often repeated and reliable to be overlooked or regarded as mere hallucinations. The slumbers of the inmates in the upper stories were disturbed by strange sensations, such as those of oppression or paralysis; they frequently continued after the sleeper was thoroughly awake and even after the lights had been turned on. The involved children appeared pale and sluggish in the morning, even cold water losing its power to enliven them.

A careful inspection of the building gave the key to the situation. The theory of undetected leaks of illuminating gas as a source of intoxication could not be verified in this case; but it developed that the gases escaping from a "viciously defective" hot-air furnace were sufficient to cause the trouble. The separation between the fire-box and the hot-air ducts (on which the hygienic integrity of the outfit depends) was badly broken, and as a result the inhabitants of the house were bathed in an atmosphere of diluted flue gases. *The Journal of the American Medical Association* is confident that this condition might be discovered in many other American homes. Flue gases contain, especially when the combustion is incomplete, considerable amounts of distinctly poisonous gases.

The symptoms in Schneider's cases pointed to carbon monoxid as the probable chief offender. Sensations of oppression and other mental disturbances are typical of acute carbon monoxid poisoning, as are also loss of psychic powers, the confused sensations and other features which explain the sense of oppression that persistently entered into the delusions of the inmates of the "haunted" house. The belief in walking spirits is easily nourished by persons in whose minds real noises would be likely to become exaggerated during the intoxication.

The sensations of apparitions induced by the breathing, during sleep, of a tainted atmosphere are of interest to the students of psychic manifestations. The hot-air furnace, often praised for its ventilating effect—and with justice when properly operated and in perfect conditions—may evidently become a distinct menace to health, as well as a cause of "ghosts."—*Jour. of the Am. Med. Ass'n.*

TYPHUS FEVER IN THE UNITED STATES.

Students of history, as well as readers of English literature of the 17th century, will recall the frequent allusions made in histories, memoirs and novels to the ship fever, jail fever, camp fever, prison fever or famine fever, which almost invariably broke out under conditions where large numbers of human beings were collected under unsanitary conditions, and especially where lack of sufficient food and clothing and the other necessities of life prevailed. Later on, as scientific knowledge increased, it was recognized that the sickness described under all of these names was the same. For years, confusion existed between this disease, called typhus fever, and the more common and familiar typhoid or "typhus like" fever. After the distinction between them was established, in this country, at least, typhus fever seemed to disappear and it was for many years regarded as a practically extinct disease. In 1898, however, Dr. Brill of New York described seventeen cases of a peculiar disease which resembled typhoid, but differed from it in some essential particulars. Other observers reported similar cases and the disease was for several years known as "Brill's Disease." In 1912, Dr. Anderson and Dr. Goldberg of the United States Public Health Service proved that this disease was in reality the old-time typhus fever, and that it still existed in this country. In a recent issue of *The Journal of the American Medical Association*, Dr. Anderson, who is the Director of the Hygienic Laboratory of the United States Public Health Service, estimates that there is at present in the large cities of the United States one case of typhus to every forty-seven cases of typhoid. According to the public health reports for 1912, typhoid occurred in six

cities of the United States during the year, as follows: New York City, 3,386 cases; Baltimore, 1,067; Boston, 477; Chicago, 1,039; Philadelphia, 1,620, and Washington, 607. This would indicate that typhus fever is present in these cities to the following extent: New York, 72 cases; Baltimore, 22; Boston, 10; Chicago, 22; Philadelphia, 34 and Washington, 12. Reports from the New York hospitals indicate that this is a low estimate. In the Jewish hospitals for 1910 there were twenty-two cases of typhus and forty-five cases of typhoid. In 1911, ten cases of typhus and forty-six cases of typhoid, and in 1912, nineteen cases of typhus and forty-four cases of typhoid. Fortunately the disease has a low mortality and shows but little tendency to spread, except under conditions of overcrowding, privation or lack of proper food.

THE BEDBUG.

The alleged humor of which the bed bug, or to give him his dignified Latin name, *Cimex lectularius*, has been the subject should not obscure the serious rôle played by the bug in common with the fly, the mosquito, the flea and the louse as a conveyor of infection. Relapsing fever, bubonic plague, kala-azar, small-pox and typhoid fever have been transmitted by various species of the bedbug, and possibly the investigator might find here the explanation of otherwise inexplicable endemics in uncleanly neighborhoods. Epidemics of smallpox have been disseminated in cheap lodging-houses by this polecat among insects; and were it not for the frequent vaccinations compelled by health departments, such epidemics would very likely be more frequent than they now are. The bedbug hides during the day and sometimes hibernates during the winter. When it lacks animal food, it feeds on the juices of decayed wood or on the dust in floor cracks, and can go without food for a long time. It may continue its existence under adverse circumstances from season to season, in lumber camps, in summer houses, empty apartments and the like.

The housewife is greatly mortified by the creature's presence under her roof; but she is by no means always blameworthy. It may get

into the traveler's trunk or satchel from an uncleanly hotel or sleeping-car or invade the home in the laundry or on the clothing, thus Manning witnessed the migration of a bedbug across the aisle of a car from a sick man to the skirts of a party of women. Or it may migrate through walls from one house to another, sometimes in a continuous pilgrimage, especially when the dwellers of an infested house move away, thus cutting off the commissariat of the parasite. It may then escape through windows as well as walls, along water-pipes or gutters to new pastures. Thus the tidiest housewife may be victimized. Apart from ordinary dwellings, log cabins easily become infested; ships also entertain the bedbug in considerable degree. Poultry-houses, dove-cotes and the hiding-places of bats may easily become infested with the bedbug or nearly related species, and sparrows' and swallows' nests under eaves, which are often alive with the vermin, may be their portal of entry into the houses.

A thorough extermination of the bedbug would result also in the extermination of other dangerous insects infesting houses. The local application of boiling water will kill a few bugs and drive others away, but serious efforts at extermination require fumigation. To be thorough, according to *The Journal of the American Medical Association*, this should be done systematically by the municipality. Manning has called attention to bedbug extermination as one of the measures to be employed in the prevention of all diseases whose virus is present in the blood of the patient during the acute stage of the disease. Of all methods Manning says that there is none which would exceed in effectiveness the annual compulsory fumigation of all habitations of man.

THE OPIUM EVIL, A NATIONAL RESPONSIBILITY.

States government, which initiated the international movement to regulate commerce in drugs, "has taken no further definite action for federal control of the opium and allied traffics of the United States." This statement appears in the report of the Secretary of State on antiopium legislation, referred to Congress, April 21, 1913, by President Wilson. Of the foreign nations

cooperating in the antinarcotic movement, many have enacted drastic domestic laws on the matter. But here is still staged the spectacle of separate states with differing laws inadequate to the situation both in detail and in enforcement. The efforts are not to be undervalued of those states which have seen the drug peril in this country and have used the means within their power to control this evil; but at the conference soon to be resumed at The Hague, significance will lie not in our stringent individual state laws but in the quality of our federal legislation; not in sporadic local efforts but in laws expressing the attitude of the nation as a whole. Meantime "there are few if any subjects regarding which legislation is in a more chaotic condition than the laws designed to minimize the drug-habit evil." It should not be forgotten that three years ago the number of drug addicts in this country was estimated at more than one million; that 400,000 pounds of opium are imported into the United States and consumed yearly, and 150,000 ounces of cocain illegitimately used; that drugged "soothing syrups," medicated "soft drinks," and habit-forming "treatments" galore still spell prosperity for their exploiters, and that almost daily are seen such reports as "cocain used by sons of prominent families," "boys use heroin," "heroin cough-tablets bought daily at confectionery store by school-girls of 11 and 13"; or yet again, "physicians sell cocain to drug-fiends," "doctor sells cocain to boys." Such facts must stir every one to respond to President Wilson's special message of April 21, 1913:

"It will always be, I am confident, a subject of gratification to the nation, that this government, realizing the extent of the opium and allied evils, should have initiated the world-wide movement toward their abolition. At this vital period of the movement to fail to take the few final steps necessary definitely and successfully to conclude the work would be unthinkable, and I therefore trust that there may be no delay in the enactment of the desired legislation and the consequent mitigation if not the suppression of the vice which has caused such world-wide misery and degradation."

The admirable efforts made by the Chinese nation to free itself from the opium traffic are well known. Surely, says *The Journal of the American Medical Association*, a young and

vigorous country like ours will not slothfully permit itself to be overcome by the evil which has been so manfully withstood by the ancient land of China, nor permit in its own legislation a weakness which might tempt China from the "unswerving sincerity" of its policy in recent years.

WHOOPIING-COUGH.

According to the mortality statistics compiled by the United States Census Bureau in 1906, from a registration area comprising slightly less than one-half of the population of the United States, there were 6,324 deaths from whooping-cough in that area in children under 5 years of age. The United States *Public Health Reports* show that in 1910 the death rate per hundred thousand was as follows: whooping-cough, 11.4 per cent.; scarlet fever, 11.6 per cent.; measles, 12.3 per cent., and diphtheria, 21.4 per cent.

Reports from thirty states show that 6,251 children died of whooping-cough, 4,232 from scarlet fever and 9,579 from diphtheria in these states during the year 1911. The relative mortality from whooping-cough, scarlet fever and diphtheria is essentially the same throughout the country, whooping-cough being almost everywhere more fatal than scarlet fever and less fatal than diphtheria. Whooping-cough is an especially serious disease in the Southern states, as is shown by the fact that in North Carolina 736 children died of whooping-cough in 1911 against a total of 447 from scarlet fever, measles and diphtheria combined. The death rate from whooping-cough in North Carolina in 1911 was 32.2 per cent. against 11.4 per cent. for the whole United States.

It hardly seems necessary to give any more statistics to prove what a serious and fatal disease whooping-cough is and to show that, instead of being a trifling affair as it is usually considered to be by the laity, it is a condition of the utmost gravity. "Any disease which kills ten thousand children per annum is," as Rucker says, "a serious one. If bubonic plague were to kill that many children in the United States in one year, the whole world would quarantine against our country. A child dead of whooping-cough is just as dead as a child dead of plague."

Ninety-six per cent. of the 6,324 deaths reported from whooping-cough in the United States in 1906 were in children under 5 years of age. Fifty-seven per cent. of the fatalities were in the first year, 23 per cent. in the second, 8 per cent. in the third, 4 per cent. in the fourth and 2.5 per cent. in the fifth year.

What is being done in this country to limit the spread and diminish the death-rate from this dread disease, asks Dr. John L. Morse of Boston, in a recent issue of *The Journal of the American Medical Association*. Surprisingly little. It is a notifiable disease in only twenty-nine states. The health officers of many of these states say, moreover, that very little attention is paid by physicians to the law requiring notification. Isolation is required by law in seven states and "modified" isolation in two others. It is recommended in another, but the secretary of the board of health states that it is rarely enforced. Few state or city health boards make any effort to prevent it, while there is almost no provision for the hospital treatment of whooping-cough in this country. For the sake of ten thousand children annually sacrificed to this disease Dr. Morse pleads that the seriousness of this disease be recognized and that its ravages be restricted. Whooping-cough should be made everywhere a reportable disease as in the case of small-pox, scarlet fever and diphtheria. The house should be placarded and the inmates instructed by the health authorities as to the seriousness of the disease in infancy and the methods to be employed to prevent contagion.

The patients should be separated from the other children in the family, if they are under 5 years of age, or the patients should be removed to special hospitals, constructed on the "shack" plan in order to give the children the maximum amount of fresh air.

Children with catarrhal symptoms, in whom there is any reason to suspect the possibility of whooping-cough, should be excluded from school. The community should be required to establish hospitals not only to take care of those children that cannot be or are not properly isolated at home, but also to take care of those babies and children ill with the disease that cannot be properly treated in their homes.

It can be confidently predicted that when the physicians and the public understand what whooping-cough really means, when proper regulations

for its control are established and enforced and when sufficient hospital accommodations for its care are provided, whooping-cough will cease to be the scourge which it now is.

NEWSPAPERS AND SUICIDE.

A few days ago a Mr. Walker of Macon, Ga., mistaking it for a headache tablet, swallowed an antiseptic tablet containing 7 grains of bichlorid of mercury. The newspaper announcements said that he vomited soon afterward, and that his stomach was washed out. Hence the probability is that the man retained barely a fatal dose, and therefore lived longer than he would have lived had the full amount of mercury taken been retained. This case was not an unusual one. Although such accidents have occurred many times, this case was "featured" by the newspapers of the country day after day, and the idea conveyed that Mr. Walker was having a good time although knowing that he was going to die. Of course the "stories" were embellished to make good reading. As might have been expected, the suggestion has had its effect on despondent waverers, and suicides by this method are now being reported; in fact, before Mr. Walker had died a Chicago paper announced one. It is a pity, says *The Journal of the American Medical Association*, that the sense of responsibility to the public is so little developed in the editors (or those responsible for the policy) of such papers as those that "featured" the Walker accident. One of our most prominent dailies recently published a cartoon ridiculing the federal senate "pure news bill" designed to prevent the publication of unwholesome news. The sensational press is doing its best to hasten the day of such legislation.

Don't dose up the babies with opiates this summer. Regulate or cut off the milk, give frequent sips of water, irrigate the lower bowel, keep the abdomen warm. A very little aconite and ipecac will allay irritation and fever. Don't forget the old-fashioned "neutralizing cordial." See that the child has fresh air.

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TREATED WITH

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THERAPEUTIC NOTES.

COD LIVER OIL IN HOT WEATHER.—Unfortunately, the disagreeable features of cod liver oil are accentuated in hot weather, a point which must be remembered when prescribing a cod liver oil product. Owing to its palatability, and ease of assimilation, this drawback to the ordinary cod liver oil does not apply to Cord. Ext. Ol. Morrhuæ Comp. (Hagee), an advantage that has had a marked influence in establishing the Cordial high in professional favor.

HAY FEVER: "DISEASE OF MYSTERY."—Dr. S. Fuller Hogsett, of Pittsburg, in his excellent paper, "An Experimental Therapy in Hay Fever," read at a meeting of the University of Pittsburg Medical Society, and published in the April (1913) issue of *American Medicine*, New York, points to some interesting facts respecting this "disease of mystery," as he not inaptly refers to it. "As far back as the year 1565," says the doctor, "Botallus reported a case. Again, in 1763, Von Halmont, and in 1698 Floyer, of London, called attention to this condition. In Good's 'Study of Medicine' there is a reference to a case related by Timaeus in 1667 of an attack of asthmatic nature caused by the odor of roses and ipecac."

Thus it will be seen that hay fever, instead of being a disease of modern origin, as many have presumed, is in reality centuries old.

Discussing the problems of etiology and treatment, Dr. Hogsett continues: "Many theories have been elaborated, and many forms of treatment have been called to the attention of the medical profession. A strain of pessimism regarding the possibility of a cure in this condition appears in the writings of many authors. No one theory accounts for all features of the affection and the many etiological factors."

In 1912 Dr. Hogsett treated a number of cases successfully with Mixed Infection Phylacogen. His observations as to methods and results are of interest and value. "In carrying out the Phylacogen treatment," he says, "I have found that the initial dose should be small when given either subcutaneously or intravenously. It has been my procedure to begin with a 2 cc. dose subcutaneously or one-half cc. intravenously. In giving the subcutaneous injection I usually select the insertion of the deltoid or the area just below the scapulae. The latter seems to be the ideal spot, as absorption takes place very readily and the complaints from the local reaction are much less. I repeat my injection either daily or on alternate days, the interval to be determined by the clinical condition of the patient. It is seldom necessary to give more than four to six injections, the symptoms often disappearing after the second or third injection. Almost immediate relief is noted by the patient. The irritating discharges from the eyes and nose are diminished in amount, the sneezing is lessened, the dyspnea is relieved, and the patient usually sleeps comfortably. All cases that I have treated successfully have remained well through the season. I have yet to record only one failure, but I have not had a sufficient number of this class of cases as yet to war-

rant a positive claim that this remedy will act in all forms of the disease."

Clinical experience with Mixed Infection Phylacogen in the treatment of hay fever is inconsiderable as yet. The product had its inception in 1912, when the season was well advanced, and the opportunities for its employment were necessarily limited. The next two months will undoubtedly tell the story of its applicability to this hitherto intractable disease, and the results of a more extended trial will be watched with a deal of interest.

EPILEPSY.—Since Brown-Sequard formulated his celebrated mixture of the bromides they have everywhere been regarded as the "sheet anchor" in the treatment of epilepsy, and whatever progress has been made has only been in the line of additions to these efficient remedies. Hammond ("Diseases of the Nervous System") says: "The treatment of epilepsy rests solely on experience. Among medical remedies the bromides stand preeminent and should be thoroughly tried in every case." He adds: "Herpin, several years ago, called attention to the salts of zinc in the treatment of epilepsy. I have used the lactate and still more recently, the bromide with very definite beneficial results." (pp. 714-716.)

Lauder Bruton says of the bromide of potassium: "It is especially beneficial in epilepsy, and by its use the convulsions can almost always be lessened, if not entirely stopped." (Therapeutics, etc., p. 521.)

Allen McLane Hamilton says of the treatment of epilepsy: "No general remedies have been of so much service as the bromides, especially those of sodium, ammonium and potassium, and since their introduction about twenty years ago, the number of cures have greatly increased and the prognosis improved, as our knowledge, derived from experimental therapeutics, has broadened." (Reference Handbook, Vol. II, p. 708.)

Since Trousseau announced the great efficacy of belladonna in the "*Petit Mal*" it has held high rank as a valuable addition to the bromides. Of cannabis indica it is well said: "In morbid states of the system it has been found to cause sleep, allay spasms, compose nervous disquietude and relieve pain." In this respect it resembles opium, but it differs from that narcotic in not diminishing the appetite, checking the secretions, or constipating the bowels. (U. S. Disp., p. 351.)

The literature upon this subject is so vast that columns might be filled with quotations from standard authorities only, but we make the briefest reference to these with a view of calling attention to NEUROSINE (a most efficient Neurotic, Anodyne and Hypnotic), an elegant preparation of the following ingredients: C. P. Bromides of Potassium, Sodium and Ammonium, Bromide of Zinc, Pure Extracts Belladonna, Henbane and Cannabis Indica, Extract Lupuli, Fluid Extract Cascara Sagrada, with Aromatic Elixirs.

THE HYPERSUSCEPTIBILITY OF CHILDREN TO OPIUM.—The hypersusceptibility of children to opium is one of the most potent reasons for employing a sub-

stitute in its place in the treatment of diseases of children. It has been found that PAPINE (Battle) is well borne by children to whom opium or morphine was intolerable, but when it is remembered that in the manufacture of PAPINE, through a special process, the narcotic and convulsive elements of opium have been eliminated, the reason for this point of PAPINE'S superiority over opium, will be well understood.

PAPINE (Battle), as is well known, is a product of opium subjected to a process which while retaining the analgesic and sedative properties of the drug, separates from it its objectionable qualities, leaving the finished product of more than ordinary worth as an opiate for use in children.

LAZARUS AND DIVES.

Despite much that has been said and written to the contrary, health conditions in American cities, as elsewhere in civilization, are improving, if diminished death-rates are a criterion. And yet health conditions in our great cities are not good enough to satisfy the humanitarian—at any rate those conditions which accompany or follow the gravest social and economic diseases of the body politic. At a recent woman's industrial exhibition were placards showing disease-engendering conditions: obviously insanitary sweat-shops, in which consumptives work on underwear, shirtwaists, bed and table linen, lace collars and other garments, to be sold on the bargain counter, and to be introduced with all their germ-content into other homes. A placard bore a doctor's statement: "I have found 182 families, 179 with contagious disease, doing this tenement work." Nicely bottled pecans are sold as titbits for the well-to-do; in this exhibition were photographs of a mother and two children in a squalid room cracking the nuts, one of the children facilitating the work by using its teeth. By such poor women and little children also (often illegally kept from school) are bristles put into hair-brushes, artificial flowers made and paper cigarette tubes rolled—and licked. One of the most melancholy aspects of our civilization, says *The Journal of the American Medical Association*, is the pay for sweat-shop work: \$1 a dozen for skilled work at gloves for which the retailer charges \$3 a pair; 30 cents for four hours' crocheting of a hand-bag which sells for \$1.50. In 204 inspected homes, 25 per cent. of the workers were between 5 and 10 years of age; nearly half were under 14; a fourth of



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the children worked five hours or more a day after school; three-fourths of these home-working families earned less than 10 cents an hour altogether. In the end, however, the consumer not infrequently must pay an awful price in sickness and in death for "bargains" prepared under such pitiless and often pestilent conditions. Well indeed has Dr. Solomon Solis-Cohen observed that "the poverty of Lazarus makes itself felt in the house of Dives;" yes, and his infections also!

IN LINE AGAINST FAKERY.

Detroit Saturday Night, a virile Michigan weekly, has joined the campaign against fakery. It has studied the field, has gathered facts about frauds at its very door, and now presents its opinion of them in a fashion that is terse, direct and sure. The *Detroit* paper offers "stories" that grip the interest even of those already familiar with the facts. Its charges are neither loose and vague nor purposely generalized to evade reprisal. If any reprisal were possible, *Detroit Saturday Night* would have known it ere now; for its reports have all the explicitness that names, places, analyses and figures can ensure, and its vocabulary includes the most vigorous terms. It knows, furthermore, the meaning of a testimonial and a death certificate side by side! But the real effect does not depend merely on crisp sentences and good headlines. The paper adorns its tale, but it also points a moral. It can ask embarrassing questions. For instance: If the claims of cure-alls be true, why do not papers carrying the advertisements of these cure-alls proclaim their worth in prominent news space? If Nature's Creation can cure tuberculosis, why continue the cost of tuberculosis hospitals and antituberculosis societies? Why spend from \$10 to \$25 for an Oxypather, Oxydoner or any other "Oxy," when an empty tomato can will do you just as much good? As an outlet for the interest aroused, the paper has definite suggestions in line of legislation. A challenge to the state authorities to take action against local fraud; a plea in the name of humanity for a bill against fraudulent advertising—

these, with definite facts concerning actual fakes, *Detroit Saturday Night* offers as part of its share in the effort to

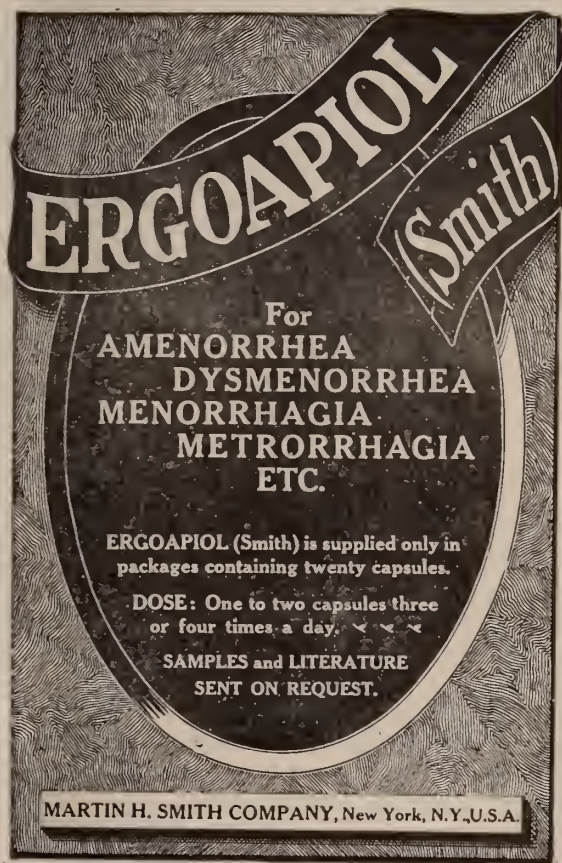
help to save mankind
Till public wrong be crumbled into dust.

THE LAY PRESS CORRECTLY CLASSIFIES FRIEDMANN.

A pool of the press on the Friedmann commercialism is decidedly reassuring. There were not a few newspapers which just after Friedmann arrived, criticized the physicians and the state laws for not freely granting him a license to practice, but the conservative course of conduct has been fully vindicated. Friedmann is now classified almost with unanimity as having fallen from grace. The Topeka (Kan.) *Capitol* calls the Friedmann deal "a surprising error in judgment." "While he may be a benefactor of humanity," says the St. Paul (Minn.) *Pioneer Press*, "he is primarily a benefactor of himself." "Friedmann has shown himself possessed of high commercial ability," remarks the New York *Call*. "He saw his opportunity, took it, and it is probable that he has got away with the money. The real worth of his discovery is important only to consumptives—and in mercantile affairs they do not count for anything except as consumers. And in this case, as in others, let the buyer beware." The Peoria (Ill.) *Star* says that "the general opinion is that Dr. Friedmann is a humbug." "Deplorable," exclaims the Pittsburgh (Pa.) *Press*. The Baltimore *Sun* comments on his "cold-bloodedness" and "willingness to make humanity a mere matter of traffic," while the Holland (Mich.) *Sentinel* wonders if Friedmann "is to end up as a patent-medicine man" and declares that "he has vindicated the skepticism of the ethical profession" and "has perpetrated a cruel hoax on the American public." Unkindest cut of all, the Scranton (Pa.) *Republican* recommends the issuance of a "fraud order directing the holding up of mail devoted to his business." The *Journal of the American Medical Association* thinks that the average newspaper editor has sized the matter up very clearly.

AN INHERITED ANOMALY.

Anomalies of form and function are common inborn defects which come to the attention of every physician in the course of his routine of experience. Oddities of human skin color, aside from familiar pigmentation defects or cutaneous blemishes, are less frequently encountered. An interesting variation exhibited by a family of spotted negroes has been described by Simpson and Castle in *The American Naturalist*. The "piebald" condition of the skin, which is spotted with white in a fairly definite pattern not unlike that of certain domesticated animals, made its appearance as a mutation or sport in a negro family of the Southern United States about sixty years ago. Aside from the immediate peculiarity of this rather unique variation there is decided biologic interest in the fact that it has already shown itself fully hereditary through two generations of offspring. To the student of heredity the data that have been collected in reference to the family are very suggestive and quite in harmony with the newer doctrines of inheritance. The negro founders of the "spotted line" were entirely normal in appearance and devoid of the characteristic pigmentation of their offspring. The pattern of the latter may be described, in terms of its black areas, as having a prominent back stripe which begins on the head and extends the entire length of the trunk, narrowing below and ending on the buttocks. The white areas are in all cases devoid of pigment, while the pigmented areas are apparently not subject to change from the definite boundaries fixed at birth. Of the children belonging to the second generation eight are spotted like the mother, the remaining seven being normal, without spots. Six of these fifteen children, three normal and three spotted, married normal negro mates. The normals have had only normal children, in all seven. The spotted ones have had nine spotted and two normal children. There is no sex-limitation in the transmission of the spotted pattern, which behaves, according to Simpson and Castle, consistently as a simple mendelian dominant character, the only peculiarity being the excess of spotted grandchildren over the expected one-half. This is quite probably a



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chance deviation. It is suggested that if in the course of time two spotted individuals of this race, not closely related, should marry each other, a new type of individual would be produced and would transmit the unique character in all its germ cells. What the appearance of this race would be can only be conjectured. The present descendants of the spotted family are now widely scattered, some of the spotted ones being connected with public exhibitions. Inasmuch as their peculiarity is an "economic asset" to them it is not likely to put a hindrance to their racial increase.

that the bitter, astringent taste is not observed. The case of the California oranges recently condemned by the federal government under the Food and Drugs Act does not come in the same class. Oranges have no starch to be converted into sugar; hence the sweating process to which these oranges were subjected merely colored them artificially instead of ripening them. Indeed, the ground on which the government seized and disposed of the fruit mentioned above was that it was misbranded as naturally ripened fruit. Fruit actually ripened by artificial means cannot be said to be unwholesome.

THE ARTIFICIAL RIPENING OF BITTER FRUITS.

It is well known that bananas are removed from the tree and shipped while in a green condition and are ripened on the stalk in warm store-rooms. Other fruits which are artificially ripened are persimmons and dates. It is found that dates in California and Arizona only exceptionally reach maturity, but, as shown by experiments of the United States Agricultural Department, they can be matured by artificial means. *The Journal of the American Medical Association* in a recent issue quotes from an article by Prof. Francis E. Lloyd which explains the chemistry of this ripening process and how it is brought about. He explains that fruits, the astringency of which in the unripe state is due to tannin, after ripening contain just as much tannin as before, but that it has undergone a combination with some other substance which prevents the solution of the tannin in the mouth and hence obviates its astringent taste and action. This effect may be brought about, in the case of dates and persimmons, by means of heat, alcohol, carbon dioxid or acetic acid. Tannin readily dissolves in water or in the juices of the mouth. It exists in such fruits as dates and persimmons in separate little sacs or membranous cells which swell and burst when brought into contact with water, thus permitting the tannin to escape; the familiar astringent bitter taste is the result. When the natural ripening process takes place or when heat or any of the chemical agents named is applied, a coagulation of the contents of the tannin sacs takes place, so that when the fruit is eaten the tannin is not dissolved at all or is so slowly dissolved

"CLINICAL REPORTS."

Physicians have long accused the public of being peculiarly susceptible to the *post hoc ergo propter hoc* line of reasoning in so far as it relates to the action of medicinal agents. One of the most discouraging phases of the fight against "patent medicines" is the impossibility of persuading John Jones, who has used Dr. Rogue's Ready Relief, that the nostrum had nothing to do with his recovery. You may prove to him that Ready Relief is only pink hydrant-water, but he still insists that as he was sick before taking it and recovered after taking it, there can be no doubt that Ready Relief cured him. But really we should not be too hard on the public. There are physicians, men who have had, or are supposed to have had, scientific training, who are just as susceptible to this error in reasoning as John Jones is. The sheaves of uncritical "clinical reports" that the exploiters of utterly worthless "ethical proprietaries" can furnish in support of the medicinal virtues of their nostrums constitute sufficient evidence to prove that the "after this, therefore because of this" style of reasoning is not confined to the laity. Unfortunately for scientific medicine there are many, many doctors, says *The Journal of the American Medical Association*, who, in standing up for their pet proprietary, take the attitude, so ably described by George Eliot, of those persons who are distrustful of scientific methods. They will grudgingly admit that while, as a general thing, two sides of a triangle are together greater than the third side, yet after all we must be careful, as it is easy to carry mathematical reasoning too far!

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SMALLPOX IN QUEBEC.

To December 20th, 1912, there were 971 cases of smallpox in the Province of Quebec for the six months as follows: July, 106 cases; August, 103; September, 63; October, 119; November, 495; December, 84.

According to Dr. Elzear Pelletier, the Secretary of the Quebec Board of Health, these figures are only a small percentage of the cases, as many municipalities refuse to report their cases of contagious diseases.

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| X—A Proposed Federal Bureau of Health. | XXI—Pure Foods and Drugs. |
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THE POISON LABEL—A NEEDED AMENDMENT.

For the purpose of safeguarding the public against the dangers of poisons, Mr. French of Idaho has introduced into the House of Representatives a proposed amendment to the federal Food and Drugs Act. The amendment which refers to the labels and containers of poisons declares that a drug shall be deemed misbranded:

"If the contents of the package be a virulent poison and shall not be placed in a container labeled 'Poison' and shall not contain on the label at least one suitable antidote and the name of the person, firm or corporation dispensing the substances, and in the case of liquids, in addition thereto, said container shall be a colored glass roughened bottle of a type described by Secretary of the Treasury, the Secretary of Agriculture and the Secretary of Commerce."

Idaho is to be congratulated on having a representative whose solicitude for the public safety may be the means of strengthening the Food and Drugs Act. "In the past," says *The Journal of the American Medical Association*, "it has been altogether too easy for careless or unscrupulous manufacturers to sell powerful drugs without giving the purchaser any hint as to the potency of the product he was buying. Another amendment should be made, or the proposed one modified, so as to protect the public still further. All 'patent medicines' containing poisonous drugs should be required to be labeled 'Poison.' The protective action of such an amendment would soon be demonstrated. In Great Britain, where there is such a legal requirement, preparations like Winslow's Soothing Syrup, containing such insidious poisons as morphin, have to be labeled 'Poison.' As a result the Winslow concern has taken the morphin out of its British product and has substituted a drug that is not listed in the schedule of poisons. But Winslow's Soothing Syrup still goes to American babies with its deadly morphin. The value of the requirement lies in the fact that the word 'Poison' has a very real and definite meaning to any person that reads English. The same cannot be said of the chemical names for various poisons. Thus the most ignorant of mothers would hesitate to give her child a 'patent medicine' that was labeled

'Poison,' but she would pay little attention to the statement that it contained morphin, for instance. The weakness of the present federal law has been referred to many times. As the law now stands, 'patent medicines' may go to the public containing such deadly poisons as strychnin, atropin, prussic acid, arsenic, etc., with no warning or hint of the presence of these drugs."

THE DANGER OF WHITE LEAD.

Occupation is undoubtedly the most important factor in causing lead-poisoning; and among the occupations the most dangerous are those in which lead is freely handled. This applies particularly to working in white lead and lead colors. The grinding of white lead with oil was formerly a large source of lead-poisoning, because the pigment was dry, and consequently the grinding-mill attendants and the lead-work laborers inhaled lead dust; but since in many factories the paint is now made with the lead in the moist state, by the gradual displacement of the moisture with oil during the process of grinding, this source of danger has decreased. The dangers incidental to the manufacture of red lead are extremely serious. *The Journal of the American Medical Association* quotes a recent writer in one of the trade journals who reports that a large decrease in plumbism in the manufacture of white lead has followed the abolition of female labor and youthful labor in England. The decrease is also consequent on ventilation, the use of respirators, overalls, enforced cleanliness and the avoidance of lead dust. No material increase in the cost of manufacture has resulted, but death and suffering have been averted. It is always gratifying to learn of progress in combatting occupational diseases, especially when, as in the lead industries, it has been so difficult to induce those employed to cooperate to their own sanitary advantage.

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TABLE OF CONTENTS

ORIGINAL ARTICLES:—

A Preliminary Report on the Effect of Strychnin and Digitalis on Man,
By David Marvin, M. D.183

Alcoholism and Eugenics,
By Watson L. Wasson, M. D.188

A New Sero-Diagnostic Test for Pregnancy, (Abderhalden's),
By C. F. Ball, M. D.190

Gleanings from the Trip of a Medical Globe Trotter,
By M. R. Crane, M. D.192

EDITORIAL197

OBITUARY200

NEWS ITEMS200

BOOK REVIEWS201


AN EPITOME OF CURRENT MEDICAL LITERATURE...202

THERAPEUTIC NOTESxii

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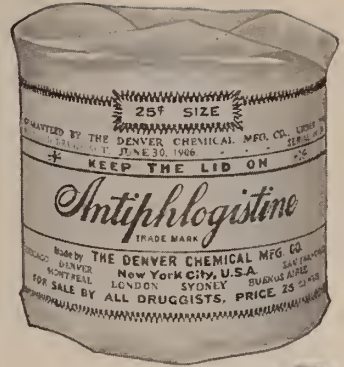
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THE ANTIQUITY OF LEPROSY.

In the latest *Bulletin* (No. 6) of the *Archaeological Survey of Nubia*, Professor Elliot Smith and Dr. D. Derry describe and figure a case which shows all the typical lesions of leprosy. The subject of the disease was found in a Nubian cemetery assigned to an early Christian century. Although the tissues are at least 1,600 years old they cut and stain perfectly, but so far no leprosy bacilli have been found in them, although various forms of cocci are seen in abundance. The authors have had many opportunities of examining the remains of many thousands of Ancient Nubians—covering a period of at least 6,000 years, yet this is the first instance they have seen suggestive of leprosy. No certain signs of syphilis have been found, but typical examples of tuberculosis do occur although not abundantly. Many of the pathological specimens described in these bulletins, including the one of leprosy just mentioned, are to be seen in the Museum of Royal College of Surgeons of England. No collection in the world can rival this in giving a continuous representation of the diseases of one people through a period extending over 6,000 years. These bulletins contain a wealth of absolutely fresh data relating to the physical characters, evolution and diseases of the Egyptian people, collected, arranged, and illustrated by accurate observers and clear thinkers.—*Br. Med. Jour.*

Slight eructation of air after meals is perfectly normal. True fermentation may be present in stasis, but this is comparatively rare. It is usual accumulation instead of excessive production of gas in the stomach which gives rise to this annoying symptom commonly called "gas on the stomach." When gas on the stomach annoys a patient he usually is nervous and has too much acid. (Give him alkalies, proper diet and general treatment).—*Medical Times*.

Field of New York notes: "We cannot at the present time accept a positive Wassermann reaction in a case of lead-poisoning as proving a

specific infection, and, on the other hand, we cannot ignore its presence. Until many observations are made and much experimental work has been done, it will be best to simply keep this fact in mind in interpreting positive reactions in individuals exposed to lead."—*Medical Times*.

A FELON MAY FREQUENTLY BE ABORTED by covering the end of the finger with cotton saturated in alcohol and protected from the air by a rubber finger cot.—*Amer. Jour. of Surg.*

Hemorrhage from an old, indurated gastric ulcer is a much more serious matter than bleeding from a more recent ulcer, since in the former the vessel may be unable to collapse and allow clotting.—*Am. Jour. of Surg.*

Active hemorrhage from a gastric ulcer is rarely fatal; the weight of evidence indicates that it is better to operate after than during the bleeding. Active hemorrhage from a duodenal ulcer is often fatal; operate as soon as the diagnosis is made.—*S. S.*

If rectal examination in a case of intraabdominal carcinoma reveals in the cul-de-sac the infiltration known as "Blumer's shelf" metastasis has developed and radical operation cannot be undertaken.—*Am. Jour. of Surg.*

When dealing with a sliding hernia don't attempt to separate the large bowel from the sac; this attachment carries the blood-supply of the gut. Free the sac, not the intestine, and reduce with the bowel as much of the sac as is attached to it.—*S. S.*—*Ohio State Medical Journal*.

THE NERVOUS INSTABILITY OF ALCOHOLISM.

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Fresh air benefits patients with other forms of tuberculosis, as much as it does those with tuberculosis of the respiratory type. It has no more influence on the lungs than on the rest of the body. Coolness, dryness and motion of the air are factors to be sought after. It has long been a current belief that one hour of driving is worth two sitting on the porch. The active motion of the air with attendant evaporation of moisture causes much of the sensation of well-being from good ventilation. Dryness of the atmosphere is important, but is of itself of little avail.—*Medical Times*.

About 99 per cent. of cases of belching is due to the escape of swallowed atmospheric air and not a sign of any pathologic condition. One swallows air with food and drink, and this accumulates and forces its way through the cardiac orifice. When belching is a symptom of gastric or general disease a nervous hyperchlorhydria is the explanation. The accumulation of gas in the stomach is not dangerous except in elderly patients, in whom arteriosclerosis or some heart lesion or some other serious condition exists, of which the flatulence is a complication.—*Medical Times*.

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An exchange says that fuchsin is a germicidal agent more powerful than phenol and has a greater diffusibility and is less toxic. It has a marked stimulative action on epithelial and granulation tissue growth.—*Medical Times*.

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Vermont Medical Monthly.

VOL. XIX.

AUGUST 15, 1913.

NUMBER 8.

ORIGINAL ARTICLES.

A PRELIMINARY REPORT ON THE EFFECT OF STRYCHNIN AND DIGITALIS ON MAN.*

BY

DAVID MARVIN, M. D.,
Burlington, Vt.

It is not the object of this article to enter into a discussion of the effect of strychnin or digitalis on the systems of the body as observed on the lower animals, or to go over the literature on the subject, but to report observations when these drugs were administered in therapeutic doses to normal young men.

Before entering on a report of the findings, I desire to call attention to the fact that text-books on pharmacology and highly scientific articles pertaining to this subject are based largely on experimental evidence furnished by the lower animals. This evidence has been and is of inestimable value in determining the presence and the location of an effect and establishes a valid reason for a continuance of the experimental work by making observations on the higher animal, man.

In a very few instances observations have been made on the normal man and the effect as seen has been reported. In nearly all cases, however, such observations have been on a single case or on a number of such cases under different conditions, thus making the results of little value. It is only when conditions are identical that a composite curve becomes of value. I question the advisability of accepting in all cases the evidence of an effect on respiration, pulse and blood-pressure furnished by the lower animals as satisfactory proof of a similar action in man. I have arrived at this conclusion after careful observations of the effect of some of our most impor-

tant drugs on groups of men and a comparison with the scientific findings on animals.

I am inclined to believe that this may be the main reason why pharmacologists and clinicians have held opposite views regarding important drugs, the pharmacologist furnishing conclusive scientific proof of action as based on the lower animals, while the clinician has failed to furnish the necessary scientific proof on the diseased man.

I think that the time is at hand when pharmacologists should establish scientific proof of the effect of important drugs when administered in different doses on the normal man, not that we can infer that a similar action must necessarily follow in the diseased man, but, from the evidence thus furnished, we will be in the best possible position to study the effect on the diseased man, compare the results and determine wherein they differ. Until this evidence is forthcoming we cannot expect that pharmacology will be placed on a highly scientific basis.

STRYCHNIN.

Strychnin and digitalis are two important drugs, the effect of which seems to have been in doubt, as voiced by both pharmacologists and clinicians, the majority of pharmacologists claiming that strychnin and digitalis do not increase blood-pressure while some clinicians claim to have seen such effect. In view of this fact and the desire to add to the evidence, I submit the following observations made on groups of medical students in the University of Vermont who willingly volunteered their services. Selection was made to exclude those who were under the influence of nicotine. They were all seated at tables in the laboratory and remained very quiet throughout this entire experiment, thus making the conditions identical. About twenty minutes were allowed to elapse before beginning observations, thereby permitting respiration, pulse and blood-pressure to return to normal. Three normal observations were then taken. The respiration and pulse were taken by students of the section who were not taking the drug, while the blood-pressure in all cases was taken by my assistant or myself.

*From the Department for Pharmacology, College of Medicine, University of Vermont.

*Manuscript submitted for publication in *The Archives*, Feb. 4, 1913.

After completing the normal observations, strychnin sulphate was injected by hypodermic into the muscular tissue of the upper arm. Observations were then made every five minutes on respiration and pulse and every ten minutes on blood-pressure.

These experiments were conducted on three different days, each time using a different dose of strychnin sulphate.

1/20 grain has no appreciable effect on the rate of respiration (Chart 1). There is an average slowing of the pulse-rate of five beats per minute from 1/40 grain, seven beats per minute from 1/30 grain and eight beats per minute from 1/20 grain (Chart 2). The maximum effect from 1/40 and 1/30 grain seems to have been reached at the end of forty minutes, while from 1/20 grain the composite curve shows a downward tendency

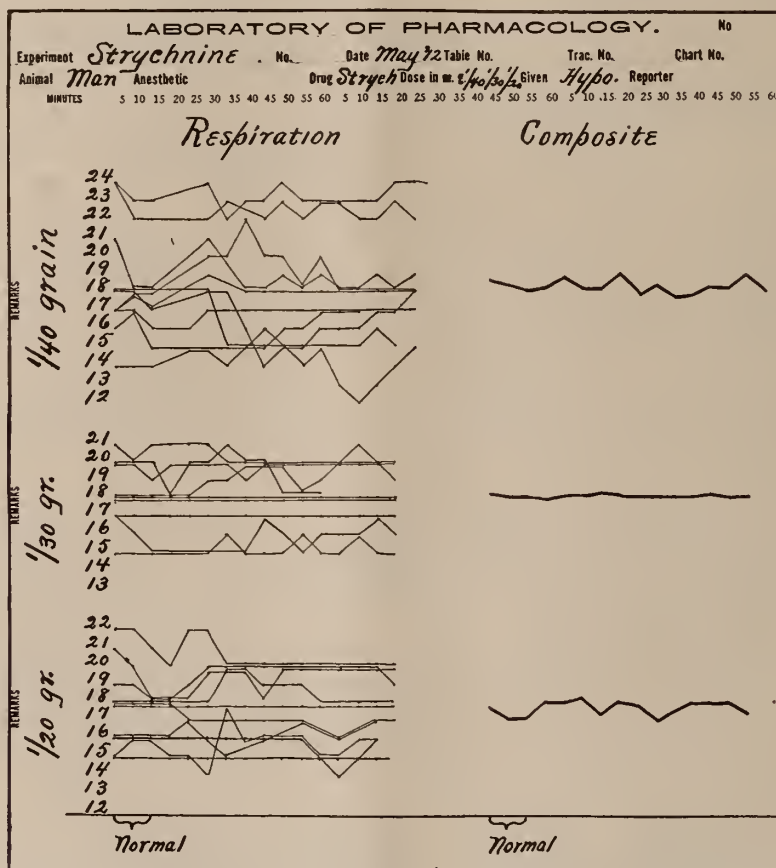


CHART 1.—Curves showing the effect at various time intervals of strychnin in different doses on the respiration.

June 3, 1912, at 9.13 a. m., ten men of Section A received 1/20 grain.

June 5, 1912, at 11.25 a. m., ten men of Section B received 1/30 grain.

June 22, 1912, at 11.15 a. m., ten men of Section B received 1/40 grain.

Nearly all who received 1/40 grain were men who did not receive the drug on June 5.

The result of these experiments seems to indicate that strychnin in doses of 1/40, 1/30 and

at the end of the experiment.

The blood-pressure curve, taking the last normal observation as our standard, shows an increase of about 3 mm. of mercury from 1/40 grain, 13 mm. from 1/30 grain and 8 mm. from 1/20 grain.

It will be noted from the graphic chart (Chart 3) that there was a slight increase in blood-pressure from 1/40 grain, a pronounced increase from 1/30 and 1/20 grain and at the end of the

experiment, the blood-pressure was increasing.

I believe that this evidence, obtained from thirty observations with varying doses, is conclusive proof that strychnin, when given in the above doses by hypodermic injection, does increase blood-pressure in the normal man.

A former series of similar experiments conducted in like manner, with the exception of the method of administration, the strychnin being

sure during one hour and twenty minutes following the administration of tincture digitalis.

The doses were 10, 15 and 20 minims, given by stomach.

These results were anticipated from the knowledge of the active principles present in digitalis and the consensus of opinion as to the time after its administration before an effect is supposed to occur.

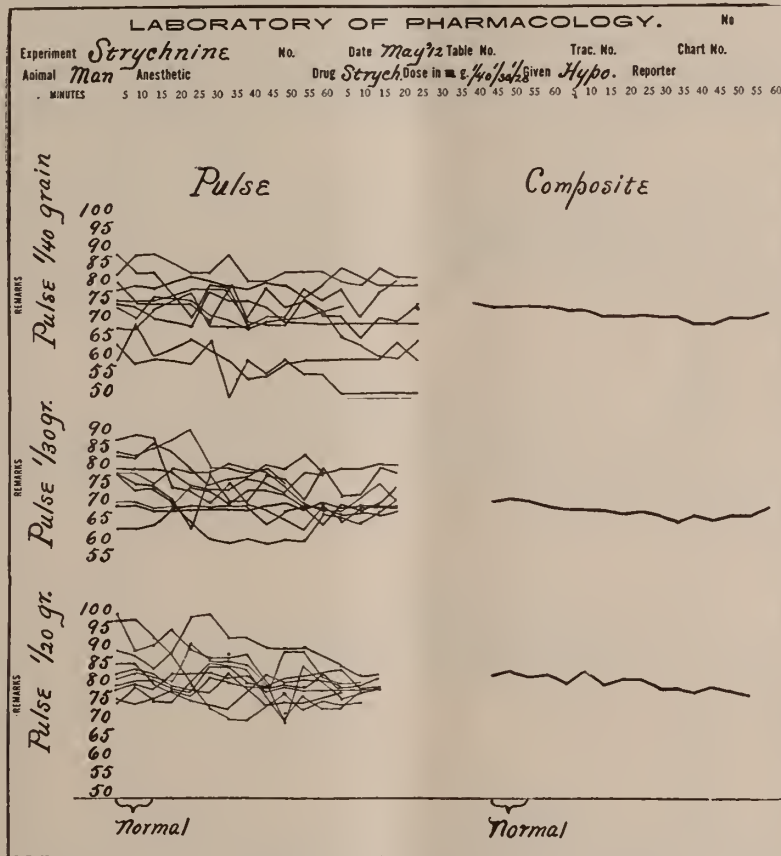


CHART 2.—Curves showing the effect at various time intervals of strychnin in different doses on the pulse-rate.

given under the tongue, produced identical results. The duration of effect was shorter, the blood-pressure returned to normal in forty minutes from 1/30 grain and in one hour from 1/20 grain.

DIGITALIS.

From experiments on groups of men conducted in like manner as in the strychnin experiments, we have failed to obtain any effect on the rate of respiration or pulse or any change in blood-pres-

Having thus failed, we determined to conduct an experiment with a group of men, taking observations twice each day. The object of this experiment was, first, to establish the presence of an effect, if any, from a single dose, and second, if an effect was noticed, to determine how long it continued.

The preparation used during these experiments was a fresh tincture made from Allen's English leaves on April 12, 1912, by W. H. Zottman & Co. of this city. After obtaining results from

this tincture, I desired that it be standardized by a disinterested person, using the same methods as are used by the large manufacturers. Mr. P. S. Pettenger of the H. K. Mulford Co. kindly volunteered to standardize it on guinea-pigs, which he did, finding it to be a 6.9 per cent. tincture. From this we conclude that the dose of 20 minims given was equivalent to about 14 minims of a standard tincture. Therefore the

These observations were repeated on May 21, in the same room and under identical conditions, at 10.30 a. m. and 2.30 p. m.; also on May 22 at 10.30 a. m.

The observations on respiration and pulse were made by students, while all observations on blood-pressure were made by myself.

A change in the schedule of this group on the afternoon of May 22 interfered with observations

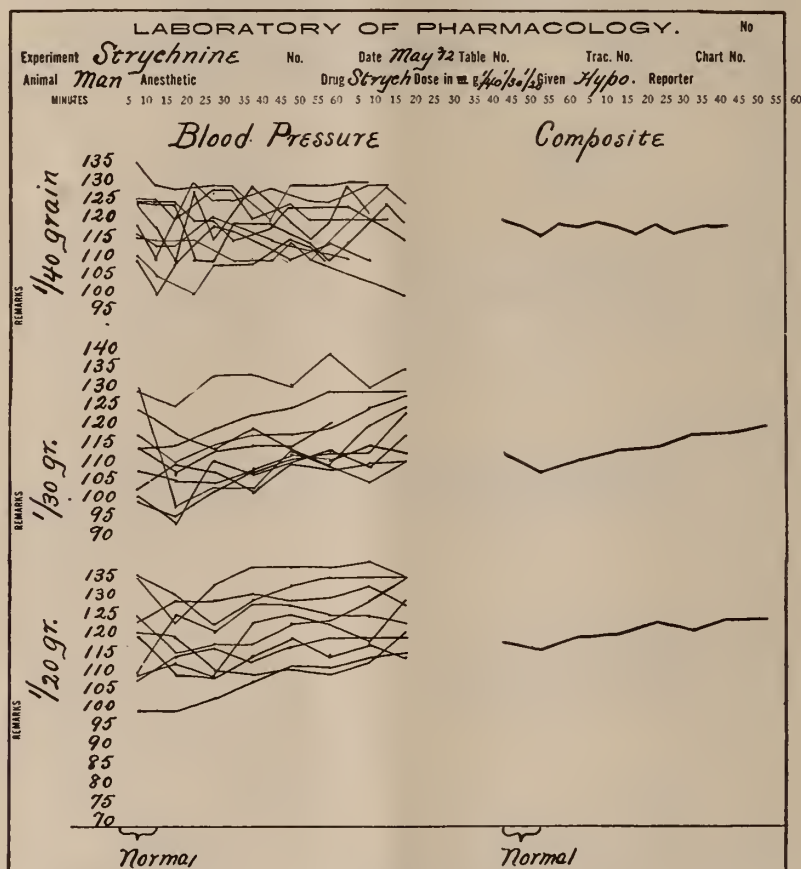


CHART 3.—Curves showing the effect on blood-pressure of different doses of strychnin.

results obtained should be considered as produced by 14 minims instead of 20.

A group of men were selected on May 20, 1912, under similar conditions as in the strychnin experiments, and, after obtaining the normal observations, they were given at 9.30 a. m. 20 minims of the above tincture digitalis.

At 2.30 p. m. on the same day, after this group had listened to a lecture for one period, and from previous instructions, had remained quiet in their seats, observations were repeated on respiration, pulse and blood-pressure.

were not made until May 23 at 10.30, when the average blood-pressure was found to be normal. This last observation is excluded from the graphic chart.

After a careful study of our findings, I determined to repeat the experiment under similar conditions, but with a different group of men and have Dr. Bush, my assistant, take all observations on blood-pressure, that he might disprove or verify my findings. This was done on May 27, 28 and 29.

The results from this group were found to

correspond with our first group, as will be seen from the graphic chart which represents all observations (Chart 4).

It will be noted that an average increase in blood-pressure of 13 mm. Hg occurred, which reached its height in five hours, and that it did not return to normal until after fifty hours had

I regret that the strychnin experiments were not conducted over a longer period of time, that the maximum height in blood-pressure and its duration could have been determined, but this was made impossible by our schedule. It is my purpose to conduct further experiments in the near future with this idea in view.

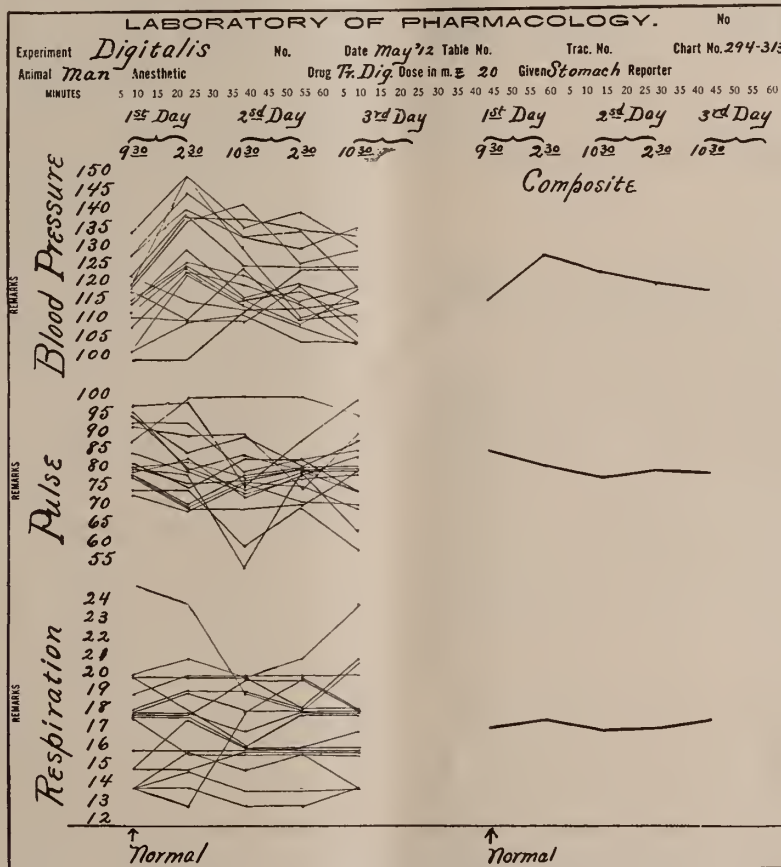


CHART 4.—Curves showing the effect of digitalis on respiration, pulse and blood-pressure.

passed.

This increase occurred in seventeen out of eighteen cases, and in thirteen the greatest effect was noticed at the end of five hours, thus proving that the old idea of the maximum effect appearing in twenty-four hours is erroneous.

A slowing in the pulse of eight beats per minute was obtained with practically no effect on rate of respiration.

Controls were used in all these experiments, which show little or no variation from a straight line. Such slight variation as occurred did not conform to the composite curve showing drug effect.

SUMMARY.

STRYCHNIN.

No effect on the rate of respiration, except from 1/20 grain, which produced an average increase of one per minute. This effect was not constant, a drop occurred occasionally, which was due largely to individual fluctuations occurring at the same time and without apparent cause.

A slowing of the pulse-rate from all doses.

A marked increase in blood-pressure from 1/30 and 1/20 grain. Practically no effect from 1/40 grain.

DIGITALIS.

No effect on the rate of respiration.

A slowing in the pulse-rate of eight beats per minute.

A marked increase in blood-pressure which reached its maximum in five hours, gradually returning to normal after fifty hours.

A persistence of action for fifty hours from a single dose of 14 minims of a standard tincture digitalis.

ALCOHOLISM AND EUGENICS.

BY

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In the May number of the VERMONT MEDICAL MONTHLY, Doctor Marvin has set forth in an admirable manner the results obtained by many different observers in different parts of the world as to the effects of alcohol upon the human organism. Experiments conducted by men of the highest scientific attainment have proved that alcohol, taken in large or small quantities is NOT a stimulant but is a paralyzer of protoplasmic activity in all departments, both physical and mental.

This assertion is made on the assumption that mental activity depends upon the functional integrity of the protoplasmic elements constituting the central nervous system and the brain in particular. We know that healthy, normal thought must mean a healthy, normal brain. There is nothing in this conception antagonistic to the spiritualistic theory of mind. The brain becomes here simply the organ by means of which the spirit or soul reveals itself. The individual differences which different persons show are but the expressions of the different instruments or brains, which the soul uses to get in touch with the outside world. One soul may be postulated as being of essentially the same substance as another.

The pathological effects of a continued use of alcohol upon all the organs of the body, and upon the nervous system in particular, have long been so well known that no description of such changes is here necessary and will not be attempted. We have to accept the fact that alcohol is a poison to

protoplasm and will change the integrity of, and eventually destroy, any cell with which it is brought in contact for any length of time. A small drink is productive of loquaciousness and motor restlessness in many individuals, but such a state is not due to the stimulative effects of alcohol upon the brain; rather is it the paralyzing of the inhibitory paths within the brain, so that fancy runs riot, unchecked by judgment and good sense.

Perhaps no better illustration of the evils of alcoholic indulgence can be supplied than those furnished by its effects upon savage tribes, to whom alcohol was first introduced by so-called civilized individuals. Civilization carries with it not alone a great many virtues but also, unfortunately, a great many defects and vices, which latter are the more easily assimilated by the native and primitive tribes, possessing, as they do, less resistive powers than do their new and civilized neighbors. The result is that disease and deterioration, both physical and mental, soon bring ruin to such natives as are unfortunate enough to be brought in contact with our boasted civilization.

To anyone who has given any time and thought to the study of alcohol and its effect upon mankind, a question naturally arises. Why is it that certain individuals manifest appetites and cravings which can be satisfied only by alcoholic indulgence? To the mind of the writer, the explanation is that heredity and congenital endowment lie behind it to a large extent. The misfits are the ones who most largely fall under the bane of alcohol. A study of the mental constitution of those individuals who have become victims of this dreadful curse to man, and who, in consequence, have been committed to the State Hospital at Waterbury, has developed a conviction in the mind of the writer that the majority of such individuals are hopeless so far as reformation is concerned. They are unreliable and have little sense of honor. If they have any true and honest longings to become citizens of a higher order, they fail to show any indications of such a state of mind. True it is that, with all the assurance in the world, they will protest that their drinking days are over, that never again will they permit themselves to so much as taste anything containing alcohol, that they would as soon die as to become reduced to the state in which they came to the hospital. Words, mere words! The thoughts of many of these individuals, amid

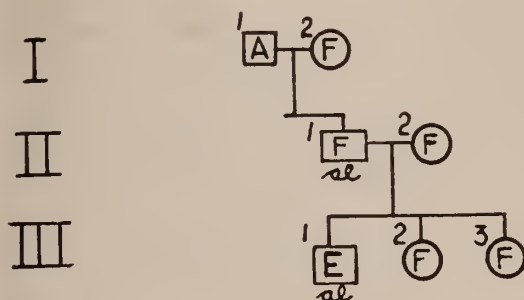
these protestations, were even then forming plans for a debauch, as the sequel has often proved.

It is true that there are many cases where normal individuals, who, for some reason or another, perhaps because of unfavorable environment, unthinkingly have become addicted to the excessive use of alcohol. These are the ones who respond favorably to the right kind of care and treatment. These cases possess the powers which enable them to overcome appetites which, in these particular instances, are not instinctive but acquired. The power which gave them this stability lies wrapped up in protoplasmic stability inherited from a line of normal ancestors. In the words of Davenport, "the bad environment has its result first and chiefly on those individuals with an hereditary predisposition toward narcotics and this hereditary bias is stronger in some families than others, depending on the nature of the family trait, and it occurs in a larger proportion of the cases in some families than others, depending on the nature of the matings that have occurred in that family."

The comparatively new science of eugenics, based upon the Mendelian laws of heredity, has taught us and more and more is teaching us that capabilities and capacities depend more upon our parents and grandparents than upon environmental conditions. There seems to be no mistake about this: the germ plasm contains the determiners which go to make up the individual. This has been demonstrated by thousands of experiments in the breeding of the lower animals. It is being shown to be true in the study of the family histories of the inmates of our insane hospitals and penal institutions. The twelve hundred defective descendants of one Ada Juke, imbecile and prostitute, is a case in point. Davenport gives this pedigree of a "family of drunkards," which shows the hereditary character and effects of alcoholism and imbecility. An alcoholic, a basket-maker, married a feeble-minded woman. From these two individuals, in four generations, sprang nearly forty alcoholic, immoral, imbecilic and epileptic offspring.

It has long been noted that alcoholism, by its poisonous influence upon the germ plasm, frequently has been productive of degeneration in the descendants of those afflicted with alcoholism. Insanity, imbecility, epilepsy and other neuroses may be cited as a few degenerative states which may originate with alcohol as a

cause. The history of a case recently admitted to the State Hospital bears upon this point.



An alcoholic, but so far as known, otherwise normal man (I. 1) married a feeble-minded woman. (I. 2) They had one child, a male, (II. 1), feeble-minded and alcoholic, who married a feeble-minded woman, (II. 2). Three children were born of these. (III. 1) was epileptic and alcoholic, committed to the State Hospital where he died from cerebral hemorrhage. (III. 2) and (III. 3) are feeble-minded.

To use a term cacogenic—the study of bad heredity—coined by Doctor Southard, we might well call immorality, imbecility and epilepsy the cacogenic triplets derived from alcoholic parentage.

If it is a fact that inebriety, in its true sense, is a form of degeneracy, what disposition of these individuals shall society make? It is patent that fines and jail sentences are of little avail in solving the problem. So long as society countenances the sale of alcohol just so long will these degenerates flood our courts and jails; so long as the manufacture of alcoholic beverages is allowed to go on unrestricted, obviously alcohol will easily find its way to those whose appetites crave it. What then can society do to meet this perplexing state of affairs? Segregation alone, or segregation and sterilization, seem to be the only means left, since no form of treatment can hope to change abnormal tissue into normal tissue. Defective they are and defective they will always remain. The civic consciousness is becoming more and more aware of the fact that inebriates are of the defective class. Society is beginning to feel the need of some form of treatment that will meet conditions in an appropriate way. Therefore, it is fair to assume that the future will find our jails free from this class of individ-

uals; our state institutions will classify them and care for them as individuals abnormal and unfitted to be at large.

CONCLUSIONS.

1. The majority of chronic alcoholics are mental defectives. (Incorrigible).
2. A certain number of alcoholics become so through the influence of an unfavorable environment. (Recoverable type).
3. Alcoholism in the parents may cause in the descendants such diseased conditions as insanity, epilepsy, imbecility and other neuroses.
4. Alcoholics of a **A CERTAIN TYPE** should be recognized as diseased individuals and, as such, should be segregated and prevented from having children.

A NEW SERO-DIAGNOSTIC TEST FOR PREGNANCY (ABDERHALDEN'S).*

BY

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Your attention is called this afternoon to a blood study (serum) full of intense interest to every physician and surgeon. Not that the test for pregnancy is alone so important but that the field opened up by this test is one that appears to promise much in helping to solve some of the problems concerned in the diagnosis of malignant new growths.

Special ferments contained in the serum of the blood produced by the system to dissolve natural and intruding substances have held the attention of our best physiologists for the past few years with definite results marking their progress as evidenced by the work under consideration.

Ascoli and Izzar, two Italian workers, developed the meiotagmine test, which is a biochemical reaction. By following the technic developed by these workers they are able to determine the presence of various existing conditions in the organism by measuring the surface viscosity of the serum acted upon by a particular ferment. The first information relative to their test as it left their hands appeared most promising for they were able to determine the existence

of certain kinds of infections or the presence of a definite form of malignant new growth by the reaction established in the serum of the patient from which the blood was taken to the respective bacteria or malignant tissue used.

Unfortunately other men of repute, working in the same field, have not been able to duplicate the results of these workers. Their work has not been in vain, however, inasmuch as it has stimulated experimental work with blood serums as to the various ferments contained.

It has remained for Prof. Emil Abderhalden, Department of Physiology in the University of Halle, Germany, to perfect a technic that is capable of being duplicated by other workers in the field of serum diagnosis. Before stating the technic it is gratifying to know that various workers abroad and those within our own states are able to duplicate Prof. Abderhalden's work with the same gratifying results he has obtained. That is to say, that this test is 100% accurate after proper technic has been developed. With this test it is possible to take the blood of any female animal and incubate it with ground placenta of the same species and determine positively whether the animal from which the blood was taken is pregnant or not or has been pregnant within a period of two weeks prior to the time of the taking of the blood. These statements mean more upon careful consideration than at first thought. The particular advantage of the test lies in the fact that it is positive one way or the other in interpreting conditions as early as from four to six week after the date of conception, up to about two weeks from the emptying of the uterus regardless of nursing. The value to the surgeon of such a blood study is inestimable in determining whether an enlargement of the uterus is due to a natural process or to tumor manifestations; as to the possibility of an extra-uterine pregnancy being taken for an enlarged pus tube, etc.

That the test remains positive for about two weeks after the uterus has been emptied by whatever means or at whatever time during the period of gestation shows the importance that may be attached to this test from a medico-legal standpoint.

It is often desirable to determine whether a woman is again pregnant during her nursing period, having had no menses since her recent delivery, but presenting grave conditions as to health from some indefinitely named cause as

*Paper read before the Rutland County Medical Society.

nursing, over-work, excitement, etc., when the real issue is the pregnant condition.

The value of this test is appreciated, when pregnancy is suspected in a girl or woman that should not be, in being able to tell definitely by a study of her blood serum alone, her real condition. The request for a blood study would not arouse any suspicion whatever. In such cases there are many other women legitimately pregnant that would far prefer to consent to a blood study rather than a pelvic examination.

It will not be necessary or advisable in this short paper to undertake to give the technic of the test in detail.

The essential features of the examination of the blood serum are the following: The blood of the patient is drawn aseptically into a sterilized centrifuging tube and immediately centrifuged, the serum drawn off and kept on ice, preferably to be examined the same day. It is preferable to draw the blood before breakfast to eliminate the possibilities of the amino-acids of digestion interfering with the test.

A special dialyzing thimble is used charged with 2 c. c. of the serum just obtained and added to a ground piece of specially prepared placenta.

The dialyzing thimble is placed in the dialyzing chamber filled with 20 c. c. of distilled water. The whole is incubated for 20-24 hours and the dialyzate is tested with triketo-hydrindenhydrate otherwise known by its trade name as ninhydrin. If the test is positive the dialyzate turns a beautiful clean blue or violet color. A negative reaction leaves the dialyzate colorless or slightly yellowish.

My experimental work with Abderhalden's biological test is not of as much interest from the large number of cases examined, as from findings. The serum from each patient was run both with placental and tumor tissue. Three cases of a known malignancy reacted positive to a sarcoma proteid. One, a carcinoma of the uterus, inoperable; one a carcinoma of the sigmoid, confirmed by X-ray; one a post-operative carcinoma of the cervix (four months after operation). Two cases were examined for a doubtful malignancy, one of the stomach, and the other of the liver. In each case the test was clearly negative.

One of two cases consulting me more than a year ago for cancer of the breast, gave a positive reaction, the other was negative. In both cases the "questionable bunches" were considered non-malignant at the time. In the case giving a positive malignant test, the blood serum also reacted to placental tissue as the woman had just given birth to a child. Consequently there appears in this instance two ferments, one reacting to tumor tissues and the other to placental tissue, or one ferment digesting two different kinds of proteids. In this series of cases I have a second parturient woman giving a double ferment and one male. I know nothing of the second woman's history, as I attended her for one of my associates when he was on his vacation. Questions on my part developed nothing so far as any possible history of malignancy was concerned. The man with a double ferment referred to, had been treated for some time for a papilloma of the bladder. He gave a history of a rapid loss of weight and strength during the few months previous to the test.

One has to ask the question: Will tumors of the genital tract cause the production of a ferment that will digest placental tissue as readily as cancer proteids? Lindig⁶ found a ferment in women, with tumors of the genital tract, that digested placental, uterine, and ovarian tissues. In this male there is evidently a similar ferment to that found by Lindig in women.

In these malignancy tests there was not the suggestion of any reaction to placental tissue except in the two parturient women referred to and this male.

Of seven known pregnancies all have reacted positive. Of four tests made to determine a possible pregnancy three showed an illegitimate condition. One girl emphatically denied such a possibility until told that her blood gave her away, then admitted it. Two girls desired the test, because of the possibility, and both reacted positive. The blood was taken in these last two cases about four weeks from the possible time of conception. The fourth case presented gave acute abdominal symptoms, with an apparently enlarged uterus. The test failed to show positive to placental tissue. Operation revealed a pronounced tubercular peritonitis, with a non-gravid uterus. In all the cases where the test

was made primarily with placental tissue the control was always negative to carcinoma tissue, except as already mentioned.

The results were further controlled by using separate thimbles of blood serum, alone; tumor tissue with distilled water; and formaldehyde or heat to inactivate the serum. These controls were always negative or the test was discarded. In one test all the thimbles went bad on account of using old distilled water. In this test the formaldehyde thimble was not run. The test was repeated with fresh distilled water and gave a satisfactory reaction. As a result of this failure, I have set up a still to furnish perfectly safe water as required.

Another fault experienced in one of my early cases, was failure to reboil the tissue and have it test negative to ninhydrin, before use. As a result of this carelessness I obtained a positive reaction in a male. Correcting the error, gave satisfactory and correct results. A second male with a history of gonorrhea reacted negative to all tissues used.

The excuse for the appearance of this article is the plea that all working with the test for the diagnosis of pregnancy may use malignant tissues at the same time, thus doubling the value of their work in sooner demonstrating the value or fallacy of the test when applied to the diagnosis of malignant conditions.

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GLEANINGS FROM THE TRIP OF A MEDICAL GLOBE TROTTER.

BY

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Of the things that I saw on my recent trip, I have tried to cull out the ones I thought would be of special interest to physicians for this paper.

As the trip started in mid-winter and such a large proportion of it was through the tropics, one was obliged to provide quite a variety of clothing in order to be comfortable. Some of the time in the tropics flannels are very comfortable, but it is not necessary—as it was formerly considered—to wear wool next to the skin. Since we have found out that the tropical diseases of the abdomen are infections and not caused by taking cold, the use of the abdominal band of flannel has been largely discarded, more especially by Americans.

The problem of food and water on such a cruise has been greatly improved since the advent of cold storage plants and the practice of keeping the drinking water separate from that used for other purposes. The water is only taken on at ports where the supply is supposed to be pure and a bacteriological examination is made in the tank before the water is used.

The Steamship Cleveland took a party of 500 tourists, ranging from 3 to 82 years of age,

around the world with very little sickness. Many of the passengers were suffering from impaired health and were taking the trip for rest as well as recreation. In a period of four months there was only one death, and that was caused by embolism of the pulmonary artery, which had its origin from phlebitis in the left leg.

We had plenty of bath rooms, a swimming pool and a gymnasium. In the tropics many of us cut out the gymnasium and took our exercise—aside from walking—in the swimming pool, as it was more comfortable than in the gymnasium.

In diet we ate most of the time as we would at home. In the tropics, when not getting much exercise, we did not eat as much meat; we also cut out salads if the vegetables were raised in China. There was danger of infection from them, as the principal fertilizers used there are human urine and feces. We ate fruit even more freely than at home, not only the fruit in cold storage, but the native tropical fruits. The only precaution taken was to see that the skin was unbroken to insure their being sterile. No insect will penetrate a tropical fruit, as they do ours as the skin contains a bitter principle or essential oil, or both. It seems to horrify many of the English to see how freely Americans drink ice water in the tropics, but we could see no harm in cooling off when we got so hot.

The first hospital I visited was in San Francisco—the Southern Pacific Railroad Hospital. It was of special interest to me because planned and built under the direction of my old college friend, Dr. Frank Ainsworth, who has been Chief Surgeon of the Southern Pacific for a number of years. This is one of the finest and most convenient hospitals I have ever seen, with 120 beds. The location is on a hill with a small park in front. It was built three years ago. The floors and wainscoting are of tile, both in the rooms and corridors. There are many devices originated by Dr. Ainsworth which are very practical. I never saw so many things for the comfort of the nurses in a hospital before. There are special lockers, rooms, baths, showers and tubs for the operating room nurses as well as for the surgeons. There is also the best signal system, with electric lights instead of bells, I have ever seen. When a patient pushes the button it turns on a light in his room, one in the corridor where the nurse in that department can see it and another one in the office of the superinten-

dent and they all remain on until the call is answered. There were several other original devices, but I will not tire you by enumerating them.

The next hospital visited was the University Hospital at Tokio, Japan—the largest hospital in that country. I have no notes on this hospital, but I think there were over 2,000 beds. They were up-to-date in every respect and used iodine as the main antiseptic.

The next hospital was the Juntuso, which is the private hospital of Dr. Sarto, who was one of the first to introduce modern surgery into Japan, and who has a great reputation all over the country. Dr. Baron M. Hatsumato showed me around. It is a well kept hospital; the nurses were all in white. Three hundred beds. Wards with from 2 to 5 beds each. The work is divided among specialists more than in most hospitals in this country. It is an old institution formerly located at Kamakura, the ancient capital of Japan. The present building is about 20 years old. The hospital is noted all over Japan for its surgery.

I was obliged, in conformity with the Japanese custom, to have covers put on my shoes before entering the hospital. In some places we had to remove our shoes and in others they provided cloth covers instead. They had finished operating for the day and the operating room had been scrubbed and made sterile. When we went in there we had to put on sterile wooden shoes, as the cloth covers were not considered clean enough.

The work is divided into six departments: Medicine; Surgery, Gynecology; Nose, Throat and Ear; Eye and Diseases of Children. Two of the doctors I met there spoke English and they were very well informed. They were very systematic and painstaking in their physical examination and their laboratory work was of a high order.

March 8th I went to the Nagasaki General Hospital which has about 200 beds, and there saw several operations. One operation with chloroform, drop method; one with novocain, 1%. I also saw several dressings. There were no operations of special interest, but they were very painstaking and used ordinary antiseptics. They were very particular and spent a great deal of time in scrubbing their hands and the field of operation with soap and water—some 15 or 20 minutes scrubbing their hands. They did not

irrigate, even their pus cases, when doing dressings—washed skin with bichloride and sopped up the discharge with gauze.

At Manila, Dr. Saleebe, a brother-in-law of Newman Chaffee, took me to the General Hospital, a fine modern concrete building, pavilion style with 330 beds. Some claim this is the best hospital in the tropics, but I saw a better one at Rangoon later. Most of the nurses were native, but there were 50 Americans.

I expected to find Dr. McDill, whom I have met several times, there as Chief Surgeon, but he left Manila about a year ago and is now practicing in Milwaukee, and Dr. Gilman, a Johns-Hopkins man from San Francisco, has taken his place. There are a number of native physicians and surgeons on the staff.

I saw a native surgeon remove tuberculous glands from the neck; he used the Mayo scissors and ether, drop method, was given by Miss Oschner—a sister of Dr. O. J. Oschner of Chicago. She has been there about two years and said she was coming back to the States in May. The superintendent said he was very sorry to have her leave, as she is the best nurse they have ever seen in Manila.

I went through the University, where much of the laboratory work for the hospital is done. Most of the routine work, both bacteriological and pathological, is performed by the native physicians and they do good work, but they need the directing hand of an American and for that reason an American is at the head of each department. The natives have no initiative.

The medical department of the university is co-ed, as well as the other department, and a native girl was at the head of the last graduating class.

Dr. Saleebe went to the Philippines as a surgeon during the war and after several years service resigned, and is in private practice. Both Dr. Saleebe and Mr. Barrett, formerly of Clarendon, took much pains in showing us around. Mr. Barrett is Chief of the Department of Horticulture in the Philippines.

Not only do they do good work in the hospitals, but the health boards have practically eliminated the serious tropical infectious diseases from the Islands.

The last epidemic of cholera in Manila was caused by a cargo of vegetables from China, which had been condemned by the quarantine surgeons and thrown into the harbor. Some of

it was picked up by the natives and eaten and in that way the epidemic was imported and spread.

The finest hospital I saw in the tropics was the new General Hospital at Rangoon, Burma. A fine, fire-proof building, pavilion plan with 500 beds. I saw the chief surgeon, an Englishman, perform a supravaginal hysterectomy for a ruptured uterus. The patient was ruptured during labor by a friend's jumping on her belly to hasten matters. The rupture was near the fundus. He used iodine to sterilize the field of operation. All of his assistants were women. There had been profuse bleeding into the abdominal cavity.

I also saw a woman just brought in with beladonna poisoning. She was in a severe state of collapse.

The senior resident surgeon, a very intelligent young Hindoo, showed me over the hospital. Many of the nurses were English, but most of the patients belong to the Malay race. I saw one nurse who had been there four years, she was going home the next week and was so overjoyed she said she was counting even the hours. The week before we landed there were 27 deaths from plague; 20 from cholera and 17 from smallpox.

Visited two hospitals at Benares, India. First went to King Edward the VIIth Hospital, of which the King laid the corner-stone. Met a Dr. Melville, a British surgeon, who had been in India for 25 years. He was a very competent surgeon and very cultured. There were a great many eye cases in the hospital and also cases of stone in the bladder were very prevalent. Dr. Melville said there was no more venereal disease than in other places where there were religious pilgrimages. He said religious enthusiasm was accompanied by an increase of venereal diseases.

Benares is the Mecca of the Hindoo religions. The pilgrims bathe in the Ganges and drink the filthy water, thus starting and spreading cholera. There were about 30 cases the day before and the epidemic was gradually diminishing. There were many cases of tropical anemia in the hospital. Acites and ulcers of the stomach and intestines were very common.

Dr. Melville does a good deal of surgery and has operated on as many as 25 cases of cataract in a morning. There is a surgeon in India who has performed a hundred operations for cataract in a day.

They are very short of funds to run this hospital and have less than \$200 a year for drugs. They cannot use iodine or potassium because it

is too expensive. They use many native drugs, some of which are very efficient. Patients get very little nursing and Dr. Melville says it is surprising how well they get along after capital operations with so little care, but—from our standpoint—they are not used to any comforts when well.

They have nearly completed a new building with a new operating room.

Adjoining the King Edward Hospital is the Lady Dufferin Maternity Hospital, which seems to have more money to work with. The doctors were all Hindoo women; also the nurses, except one Irishwoman about 40 years old, who has lived in India since she was 2 years old. The doctors were very intelligent and attractive young ladies. They were educated in the University of Bombay, which has a four year medical course. The superintendent of nurses was a very bright and well educated Hindoo.

They have very few normal deliveries in the hospital—nearly all instrumental cases and many Caesarean sections; also many cases of puerperal convulsions, which seems strange as most of the Hindoos are vegetarians. All the operations are performed by the native women surgeons. The hospital was very clean and they whitewash the ceilings and walls of each room as soon as vacated and never put in another patient until it is done. The doctor told me the Hindoos were a very neat people.

I went to the General Hospital at Colombo, Ceylon, with a Dr. Newman of New Orleans. They have a large hospital, pavilion style which covers several acres. It is a well kept building in good repair, but old. They are rebuilding it a building at a time and have a good operating room. There were 600 beds.

Dr. Paul, a native, is the chief surgeon. He is a Singalese, and a very fine operator, cool and unassuming. He is also very well posted. He uses biniodid of mercury, 1 to 500, in alcohol to sterilize the field of operation. Dr. Paul is the surgeon who operated on Dr. Eliot, ex-president of Harvard, a year or two ago. The operation was not performed at the General Hospital, but at Kandy, 75 miles up in the mountains where it is cooler.

Dr. Newman said Dr. Paul was one of the very best operators he ever saw and Dr. Newman ought to know, as he was under Dr. Matas in New Orleans, for 7 years after he graduated.

When we were in Bombay there was an epidemic of bubonic plague raging, average number of deaths 30 a day. I intended to go to the plague hospital, but did not have time.

At Rome, went to Prof. Bastillini's clinic. Dr. Bastillini was not operating, but saw one of his assistants do several minor operations. The method of sterilizing with iodine and gasoline and $3\frac{1}{2}$ tincture of iodine, originated at this clinic. They are very particular to use no water before using iodine preparations.

There were about 1,400 beds in the hospital. There were 14 English nurses training the Italian student nurses; the head nurse in the operating room was English.

May 21st went to Prof. Bier's clinic in Berlin. There were no operations of special interest at Prof. Bier's clinic. He and his first assistant, Prof. S——— both spoke good English and they took pains to explain their cases to me. They used iodine as an antiseptic and ether, drop method, for most of the cases, preceded by hypodermics of morphine and atropine about an hour before the anesthetics is given. I also saw them use a local anesthetic, both by infiltration and blocking off by injecting into the nerve.

Prof. Bier is a fine operator and has a good organization in his clinic, but no better than many of our American surgeons. Saw no irrigation used either in pus or clean cases. They also use dry bandages on the edges of abdominal incisions.

In a case of appendicitis, after making an incision down to the peritonium, they took a stitch into the superficial fascia and a big bite into the skin and then on the other side—to retract the edges before opening the abdominal cavity—thus obviating the necessity of using the metal retractors.

I saw him operate for fracture of the neck of the humerus, 10 days' standing, as he could not get perfect reduction. X-ray plate showed only a slight tilt; he used a heavy lever to overcome the angle. There was considerable oozing of blood, but he did nothing to arrest bleeding, nor did he do anything to retain fragments. Closed the wound without drainage.

This was the first time I ever saw a hay rake used in an operating room. They raked up the sponges and pads on the floor.

If these observations have interested you I shall feel well repaid for the time spent in sifting

them out my notes and putting them in order. Although they do not contain much useful information, I hope my observations and impressions will give you a clearer idea of what they are doing on "the other side of the lantern" and help you to realize more vividly—although this is the best country in the world to live in—that we can learn some things from any one of the oriental countries, which will be of advantage to us.

In travel we do not learn much that is of practical use to us in our life work, but it broadens our vision and like literature, art and a dozen and one other things, enables us to get much more pleasure out of life.

Although the trip has broadened my ideas in many respects I have not learned much that will be of practical use to me in my life work and I am the same "Old Plug" that I always was.

WOMEN MOTORISTS.

Women motorists are increasing in numbers; and this fact is said to be stimulating manufacturers to build cars with especial reference to feminine abilities and limitations. "Cranking up" has heretofore certainly been a man's work. When the self-starter has been perfected, however, as it now promises to be, and becomes simple, inexpensive and reliable, about the last mechanical impediment to a woman's handling her own car will be removed. Even now the clutch, which used to require a man's muscular power to disengage, generally needs only the strength which the average woman can easily exert, and new devices make it possible for women to adjust tires. *The Journal of the American Medical Association* discusses this subject in a recent issue, with special reference to the physical effects in women of continued motoring.

Driving a motor car from April to November should be a healthful recreation, both physical and mental, for many women, provided the exercise be within reasonable limits and the car a runabout or light roadster—one, at any rate, not too heavy for a woman to handle. The "weaker sex" are naturally quick of eye and deft of wrist, two qualifications, aside from sufficient strength, which are needed. Women are in general more excitable and of less steady judgment than men,

shortcomings which may prove disastrous in emergencies, or which might render it advisable to confine motoring efforts to areas outside the crowded portion of the larger cities. It offers much pleasure and benefit, perhaps, and may be indulged in when the other forms of exercise or sport are unavailable or unsuitable. Rational motoring affords opportunity for plenty of fresh air, with improved appetite and increased zest of life. The ever-changing scenes may soothe and satisfy the emotions, and hitherto unfamiliar aspects of civilization may interest and divert from introspection.

There is, however, quite a formidable array of troubles, nervous and otherwise, which have been charged against motoring, and which point to the fact that the sport at best is a somewhat strenuous one for women. The ailments for which the motor-car may be held responsible are due almost entirely, however, to speeding and to the fear of accidents which might be engendered as the result of this.

The "auto-eye" is a spasm of the ciliary muscles (which govern accommodations for distances); to this those who have errors of refraction are specially prone; speeding over an unknown country, through devious roads, the sight being constantly and rapidly attracted by objects now near and now in the distance, makes an abnormal strain on the visual mechanism.

Wind and dust, coupled with high speed, induce any degree of conjunctival inflammation, from a hyperemia to a contagious lesion the wearing of goggles largely obviates this. Auto-leg is a cramp due to sitting in one position for hours, while the veins and muscles are under strain from consecutive shocks and joltings over bad roads.

Nerve strain and nerve exhaustion, followed by hysteria and neurasthenia, are not rare, especially among young women who motor extensively. Such attacks come on relaxation after strain in a rapid run over many miles, but they are not ordinarily serious in healthy women; but may be in those not up to par as to their nervous systems. The excitement of motoring may appeal to such women. The ever-increasing stimulation inherent in speeding may sooner or later end in prostration. For such cases entire rest and complete abandonment of motoring are absolutely essential.

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EDITORIAL.

The fifteenth Annual School of Instruction for Health Officers will have been held (August 4th to 7th) before this issue of the Journal goes to its readers. This institution is one of which Vermonters should be especially proud as this State was the first to hold such a school. The first session, fifteen years ago, was the subject of much comment not only in American medical journals but also in those of foreign countries. How well Dr. J. H. Linsley builded when his productive brain conceived the idea and his boundless enthusiasm and energy carried the first session on to a successful completion is amply attested by the fact that the fifteenth consecutive session has just been held and the further significant fact that the idea has been largely copied elsewhere. We can conceive of nothing in which organization is so essential as in efforts looking toward the preservation of the

public health. No geographical division however small or large can be independent of others in matters of this kind. This is becoming more and more true every day with the marvellous advances in the ease and rapidity of travel. The railways and steamships did much, but the automobile is doing more to make us all near neighbors and thereby increase the tendency of communicable diseases to spread over wide areas. Our last legislature seeing clearly that local health conditions are matters of general concern voted to reimburse the local health officer for his time and expenses while attending this school from the general fund, thus making a long advance toward that much-to-be-desired time when the health officer shall be recognized as a state rather than a local official, receiving his salary from the general treasury rather than the town and so removed from local influences which often work to minimize his efficiency.

These schools should result in perfecting a public health organization which will be a model of efficiency. That they have already done much is certain and that they are destined to do more cannot be doubted. Vermont has been wonderfully free from diphtheria and typhoid fever during the last few years and smallpox and scarlet fever though present among us have been well held in check. When there are more definite means of making an early diagnosis of these diseases as well as measles and whooping cough we have a right to expect that they be practically stamped out.

We have at hand a report of The Public Health and Hospital Committee dealing with the subject of post-mortem examinations in the United States. The facts presented by this report are of immense importance to the medical profession and the general public vitally concerning as it does the standing of medical science in America. It is a

condition in which every practitioner of medicine whether connected with some hospital or in private practice should take a vital interest. That the autopsy has become so rare in America while to some extent explained by the revolt from troublesome government supervision and the correspondingly intense love for individual liberty under which our constitution and laws were framed is largely due to the indifference of physicians. Even with the dead body so thoroughly protected by law as it is, it is possible in a much larger proportion of cases to gain consent for a post-mortem examination. We do not believe that the physician who shows the continued interest in his patient evidenced by a request for a post-mortem will be often met with a refusal if the request is couched in a tactful manner. It will convince the people that he is not afraid to have his diagnosis and treatment put to the final test.

If physicians will work together to this end a great change in public sentiment on this subject can be brought about. So long as there remains the tremendous discrepancy in the percentage of fatal cases coming to autopsy, as shown by 99.9% in the Allgemeines Krankenhaus of Vienna, 93% in Berlin, as against the 7.6% in the Boston City Hospital, so long must we expect that Europe will outrank America as a medical center and the German and Austrian physician surpass the American as a diagnostician. So important do we consider this report and the commendations contained in it that we quote it largely:

The striking fact brought out from the comparison of the statistics of autopsies in foreign hospitals and in American hospitals is that the percentage of autopsies performed in our largest hospitals, some of them connected with teaching institutions, is but one-eighth of the percentage of autopsies performed abroad. While the University College Hospital of London reports an average of 8 per cent. of autopsies, St. Thomas'

Hospital of London reports an average of 75 per cent., St. Bartholomew's of London an average of 79 per cent., another English hospital an average of 83.7 per cent., the Montreal General Hospital an average of 83 per cent., Bellevue Hospital of New York performed autopsies on only 10 per cent. of patients dying in the hospital, Boston City Hospital on 9 per cent., and the Philadelphia General Hospital shows an average of a little over 10 per cent. And these are the three largest hospitals in the country. Other hospitals show a still lower percentage, while a number of the smaller hospitals in which the number of deaths is comparatively small show much higher percentages. Thus, Johns Hopkins Hospital had post-mortems performed in 62.8 per cent. of cases and the University of California Medical School Hospital in an average of 42 per cent. of cases, but the total number of deaths in these two institutions for the last three years amounted to 705, all told, while the number of deaths in Bellevue alone for the same period was 8,918, in Boston City Hospital 4,421, and in the Philadelphia General Hospital 5,921—a total of 19,260 deaths as against the 705 cases of the two institutions in which the percentage of autopsies is relatively high.

The relative as well as the absolute number of autopsies in some of the American Hospitals has been constantly falling off within the last few years. The number of autopsies in the Boston City Hospital was 195 in 1910, 113 in 1911, and only 100 in 1912, while the number of deaths in the hospital in that year was 1,611 as against 1,327 deaths in the year 1910. In the New Haven Hospital the percentage of autopsied cases fell from 14.6 in 1910 to 6.8 in 1911 and 8.5 in 1912. In the Albany Hospital the percentage of post-mortems has dwindled from 10 in 1910 to 4.8 in 1912, and in the Philadelphia General Hospital 324 post-mortem examinations were held in 1910 and only 196 in 1912. The variations from year

to year in the number of autopsies in the English and European hospitals are insignificant and they never fall below 70 per cent. When the Philadelphia General Hospital had 196 post-mortems for its 1,749 deaths, Bellevue 343 for 2,915 deaths and the Boston City Hospital had 100 autopsies for its 1,611 deaths, in the Allgemeines Krankenhaus of Vienna 1,866 cases out of a total of 1,867 deaths came to autopsy in one year. In the Eppendorf Hospital, Hamburg, 2,220 cases out of a total of 2,487 were autopsied, and 244 out of 284 dying in the hospital came to autopsy in the University College Hospital of London in 1911.

Five causes can be assigned for this pitifully poor showing of our hospitals: (1) adverse public opinion and existing prejudices; (2) the existing law; (3) the undertakers and burial societies; (4) hospital rules, and (5) the claims of the departments of anatomy.

SUMMARY OF THE REPORT.

1. The history of medicine shows that modern progress in medical science and the further development of medicine in the future is closely correlated with the extensive use of cadavers for post-mortem examinations.

2. In European countries the importance of necropsies has been universally recognized and neither public opinion nor prejudices, nor the law, cause any difficulties to the use of persons dying in hospitals for purpose of post-mortem examination.

3. The absolute and relative number of autopsies performed in American hospitals is extremely small in comparison with the number of autopsies performed in European hospitals.

4. Our research institutions, scientific bodies and medical colleges are greatly hampered in their work by the prevailing hostile attitude of the public and the law with regard to the performance of autopsies.

5. Our laws relating to autopsies are indefinite in expression, uncertain in application, obsolete in spirit, detrimental to scientific progress and injurious to the best interests of the public.

6. The main causes of the difficulties in obtaining permission for autopsies are due (a) to the ignorance on the part of the public of the importance of autopsies to science and therefore to the welfare of the people; (b) to the existing inadequate laws; (c) to the activity of undertakers and certain funeral societies; (d) to the inadequate rules of the hospitals in this respect; and (e) to the claims of the department of anatomy.

7. As a result of the slight opportunities given to physicians to study their errors of diagnosis, the percentage of incorrect diagnoses is unduly large.

RECOMMENDATIONS.

The small number of autopsies performed in our hospitals despite the efforts made by many of them to obtain permissions for performing them, proves very forcibly that some changes in the public mind and in the existing laws must be brought about in order that medical education and medical progress in this country may not be seriously hampered.

The committee would therefore recommend:

1. That effort be made on the part of various medical bodies to interest the press in the matter of autopsies with a view of presenting to the public the absolute dependence of medical progress and education on the regular performance of post-mortem examinations.

2. That effort be made to secure legislation relative to autopsies, similar to that of European countries, which would obviate the necessity of securing written permissions and at the same time safeguard all the present rights of the relatives.

3. That the law should be so amended as to recognize the difference between anatomic dissec-

tion and pathologic autopsy made for scientific purposes.

4. That until such legislation is secured, the boards of managers of all our private hospitals be urged to have the hospital rules so changed as to remove as much as possible the obstacles now placed in the way of securing autopsies.

OBITUARY.

Albert Henry Phelps, M. D., University of Vermont, 1884; for four years a member of the medical staff of the Santa Fe system; a member of the Legion of Honor, France; died at his home in Glens Falls, N. Y., June 14th, from heart disease, aged 50 years.

Dr. Martin Luther Bruce, of Brattleboro, Vt., a graduate of the University of Vermont Medical College in 1872, died at his home on June 7th, aged 68 years.

NEWS ITEMS.

It is announced that the Nebraska bacteriological laboratory of the State Board of Health will be located in the State Capitol Building.

The State Board of Health Laboratories of Minnesota have completed arrangements whereby they are prepared to furnish antityphoid inoculation gratis to all physicians and public health officers who apply.

Dr. William J. Mayo of Rochester, Minn., has been elected a corresponding member of the Academy of Medicine, Paris.

The State Board of Health of Florida has decided to erect a two-story laboratory building in Pensacola, similar to that already erected at Tampa, to cost about \$20,000.

The building commissioners of Chicago have directed the closure of two hospitals on account of insufficient stairways and exits.

Staff physicians of the City Hospital, Columbus, Ohio, have decided that Dahaid Hffan, the Syrian leprosy suspect, is suffering from that disease. He is being held in quarantine at the hospital.

The report of the Kansas Board of Health regarding hotel inspection shows that 1,288 hotels were inspected during the year. Of these, 838 were licensed, 450 were not given certificates and of the latter 70 were ordered closed.

The committee on school inquiry of the Board of Estimate of New York City have reported that the open window system of ventilation is not conducive to health or proper regulation, that the present mechanical method of ventilation is harmful even more so than the primitive open window method. That the latest mechanical ventilation system should be installed in school houses; that where ducts cannot practically be installed individual devices be used to sterilize, humidify, wash and temper the air and that more money and time be applied to carry on the investigation. Some other conclusions were that overheated and overmoist air was the principal cause of discomfort and injury to health in ill-ventilated rooms.

Doctor B. L. Arms, formerly Director of the Bacteriological Laboratory of the Boston Board of Health announces that he has accepted a position with the Oregon State Board of Health and will be in charge of their laboratory at Portland, Oregon.

Dr. Harry Kilgore, of the University of Vermont, class of 1911, now located at Thorndyke, Me., was married on June 11th to Marian Morgan, daughter of Dr. and Mrs. G. E. Morgan of Vergennes.

The annual meeting of the Franklin County Medical Society was recently held at Eagles' hall, St. Albans, and was attended by about 25 physicians. Lunch was served at the Colonial Inn, after which a business session was held at the hall and the following officers elected: President, Dr. George S. Clark of Montgomery; vice-president, Dr. W. B. Arnold of St. Albans; secretary-treasurer, Dr. W. J. Upton of St. Albans. The general subject of discussion was "Tuberculosis" and papers were read by Drs. S. W. Paige of St. Albans, H. H. Johnson of Franklin and Alan Davidson of St. Albans. Dr. Bell, superintendent of the Vermont sanatorium at Pittsford, was unable to be present because of illness.

The Addison County Medical Society held its annual meeting at the State Industrial School,

Vergennes, June 16. Dr. F. C. Phelps acted as temporary chairman until the arrival of the president, Dr. S. S. Eddy of Middlebury. Dr. F. M. Sears, professor of neurology in the University of Vermont, and Superintendent J. N. Barss of the State School discussed "The Mentally Deficient in the State of Vermont." Officers were elected as follows: President, Dr. S. S. Eddy of Middlebury; vice-president, Dr. F. C. Phelps of Vergennes; secretary and treasurer, Dr. E. H. Martin of Middlebury. At the close of the business meeting a lunch was served in one of the cottages. In the afternoon an excursion in two motor boats down the river to Fort Cassin and return.

The State of Pennsylvania has adopted a eugenics marriage license act.

This act forbids the granting of a marriage license to persons either one of whom is imbecile, under guardianship as of unsound mind or subject to a transmissible disease. It further provides that no man who is or has been within five years an inmate of a county asylum or poorhouse shall marry until he can show that the cause of his condition is removed or he is able to support a family.

By unanimous vote the House of Representatives passed the bill offered by Representative Harrison of New York imposing a prohibition tax on the sale of smoking opium in the United States.

The tax is fixed at \$200 a pound on opium sold for smoking and authorizes the levying of enormous fines and other penalties for violations of the law.

Dr. Arthur Lionel Patch, Harvard 1909, has located in Windsor, Vt. He has recently practiced at Somerset, Vt.

The sixty-first annual meeting of the Maine Medical Association was held in Portland on July 2-3. There was a large attendance despite the fact that many doctors were unable to come owing to the proximity to "the Fourth."

The society this year followed the example of the Vermont Medical Society and opened the annual banquet to ladies—the innovation was a great success and will undoubtedly be a permanent feature.

Dr. W. C. Peters of Bangor, a practitioner well known throughout the state, was elected presi-

dent for the ensuing year and it was decided to hold the next meeting in Portland in June, 1914.

Dr. E. D. Miville, Vermont Medical School, has opened an office in Manchester, N. H.

Dr. J. T. McGinity who has practiced for a number of years in Ludlow, Vt., has recently left there and after six months or more of post-graduate work will open an office in Springfield, Mass.; where he will confine his practice to diseases of children.

Dr. Page has removed from Pittsford to Ludlow, where he has taken over the practice of Dr. J. T. McGinity.

Dr. W. O. Brown has opened an office at Littleton, N. H.

Dr. A. Borland has removed from Sharon, Vt., to Meredith, N. H.

Dr. J. S. Black of Nashua has just returned to his office after an operation for appendicitis, which has laid him up for nearly three months. His brother, Dr. D. L. Black is now in Manchester, N. H.

BOOK REVIEWS.

A COURSE IN NORMAL HISTOLOGY.—A guide for the practical instruction in histology and microscopic anatomy by Rudolph Krause, A. O. Professor of Anatomy at the University of Berlin. Translated from the German by Philip J. R. Schmahl, M. D. With thirty illustrations in text and 208 colored pictures, arranged on 98 plates after the original drawings of the author, in two parts. New York: Rebman Company, 1123 Broadway.

The first part of this work is simply a guide to the technique of microscopy, and may be used by the student of medicine as well as by those who pursue subjects of science foreign to medicine.

The second part deals exclusively with histology pertaining to medicine. In bringing this work before the public the author expresses it as his aim to give to the student a book of reference which is both practical and theoretical, as well as to furnish the teacher with a text-book which provides him a detailed yet clear, concise and methodical guide through the course of microscopy and histology. So far as the student of medicine is concerned he will find therein much valuable information pertaining to microtechnique. The illustrations are good.

SEX, ITS ORIGIN AND DETERMINATION.—A study of the metabolic cycle and its influence in the origin and determination of sex, the course of diseases, parturition, etc., by Thomas E. Reen, M. D. Rebman Company, Herald Square Building, 141-145 West 36th St., New York.

The author of this very interesting subject attacks the matter with a general review of the methods of reproduction in the animal kingdom followed by a review and criticism of the various theories which have been advanced on the subject of sex determination. He shows the existence of primitive hermaphroditism in all the animal kingdom and the latent bisexual tendencies of even the higher forms. After laying a further foundation by a discussion of twin births he demonstrates the bisexual rhythm in germ plasma and finally advances and defends his theory of the influence of the lunar months and lunar days in its relation to the phenomena of menstruation, gestation and other normal functions; fluctuations in the course of infectious diseases, the progress of labor and the determination of sex.

STERILITY IN THE MALE AND FEMALE AND ITS TREATMENT.—By Max Huhner, M. D., New York, Chief Genito-Urinary Department, Harlem Hospital Dispensary, New York City; Formerly Attending Genito-Urinary Surgeon, Bellevue Hospital, etc. Rebman Company, 141-145 West 36th St., New York.

The author reports an enormous amount of original work and his work is bristling with originality and his conclusions based upon personal experimentation, detailed accounts of which are given. The book adds much that is new and well verified to the subject.

THERAPEUTICS OF THE GASTRO-INTESTINAL TRACT.—By Dr. Carl Wegele adapted and edited, with additions on the diagnosis of the diseases of the esophagus; diagnosis of the diseases of the gastro-intestinal tract; duodenal tube and its uses; diseases of the pancreas, and X-ray examinations of the gastro-intestinal tract by Maurice H. Gross, M. D., Attending Gastro-Enterologist, and I. W. Held, M. D., Attending Physician to the Har Moriah Hospital. With 52 illustrations in the text and 2 figures in colors on one plate. Rebman Company, Herald Square, New York.

The original German work of Dr. Wegele is a specially conscientious and thorough treatise upon the therapy of the stomach and intestinal diseases because it comprises in short systematic

arrangement many important facts which are scattered in specialized works too exhaustive for the busy practitioner. To this the American editors have made extensive additions. These additions are concerning the diagnosis.

HYGIENE AND SANITATION. A Text-Book for Nurses.—By George M. Price, M. D., Director, Joint Board of Sanitary Control; Director of Investigation, New York State Factory Commission. 12mo., 236 pages. Cloth, \$1.50 net. Lea & Febiger, Publishers, Philadelphia and New York, 1913.

This is the best text-book upon the subject which it has been the good fortune of your reviewer to see. It is clearly and readably written and contains, shed of all superfluous verbiage, the things which a nurse should know concerning the subject.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

THE SURGEON AND RESEARCH.

In his chairman's address before the Section on Surgery at the late meeting of the American Medical Association at Minneapolis, A. F. JONAS, Omaha (*Journal A. M. A.*, July 5), emphasizes the importance of scientific training and the scientific spirit for the surgeon. The leading medical schools give a laboratory training, but in many instances the routine and fatigue of practical work absorb the surgeon's time and unfit him for laboratory research work. The surgical profession falls into two groups, those who have the desire and opportunity for research, and the larger class who devote themselves to the practical clinical side of their specialty. Many of these practical workers have in the past made most important contributions; they were not bound by tradition and their lack of modern facilities could not cripple their observing and constructive faculties. They were the pathfinders, and it becomes the duty of those that follow to solve still more difficult problems with more refined methods. The surgeon has learned the need of a special training and of the co-operation of the pathologist, who himself needs the surgeon to supply him with the problems for which he is specially trained and to keep him from becoming too impractical a theorist. Cooperation in scientific work gives the best practical results. The clinical and laboratory work must progress side by side in agreement, and if otherwise, we should hold to the clinical findings for the sake of the patient until there is harmony between the two. Jonas goes on to describe the requirements of the research laboratory as an aid to the surgeon and the qualifications needed for its director and assistants. If it is impossible to have both combined, the hospital research laboratory should be in close proximity to the physiologic laboratory. Clinicians have sometimes in the past been slow to apply to practical use the discoveries of

the physiologist. The author points out the vastness of the field still open to the cooperating work of all.

THE COUNCIL ON PHARMACY.

The activities of the Council on Pharmacy and Chemistry of the American Medical Association are described by T. SOLLMANN, Cleveland (*Journal A. M. A.*, July 5). The story, he says, has been told before, but he thinks it is worth repeating again, since it contains facts and lessons that cannot be too often stated. The check exerted on the exploitation of proprietary remedies is first noticed, together with the instructive work embodied in the New and Non-official Remedies publication. A number of manufacturing firms have shown a laudable desire to cooperate with the Council, but as a whole they have not appreciated the advantages they could derive by a conscientious adherence to its rules. The medical journals are many of them at fault and many of them are still carrying advertisements of remedies of doubtful value, and even of those which have been exposed as fraudulent. The principle of "let the buyer take his chances" is coming into disrepute even in ordinary business and has never been countenanced by the medical profession. The financial needs of a journal that keeps up such advertisements are not an excuse worthy of any respect. Among the present activities of the Council is a useful little book on "Useful Remedies," the present edition of which is simply a program issued to call out suggestions. The completed work will be of larger size and give more details. It is not intended to replace the Pharmacopoeia or pharmacologic text-books. Another committee of the Council has prepared a series of educational articles on serums and vaccines, a subject which is developing so rapidly that the practitioner finds it difficult to keep up with it. The notable results from this field attracted a corps of camp followers whose work, if unrestrained, would bring the whole subject into discredit. Sollmann especially cautions against the shot-gun methods in this line. He thinks the results have shown the value of the Council's work. Things are not yet ideal, but they are better than they were. The profession has become more critical and the teaching of these subjects in our medical schools has been vastly improved. It is worthy of note that Germany, which has so long claimed intellectual leadership, has appreciated the lesson and has organized a commission along similar lines.

CANCER.

J. LOUIS RANSOHOFF, Cincinnati (*Journal A. M. A.*, July 5), pursues his study of anaphylaxis in the diagnosis of cancer. His preliminary report was made two years ago. Since that time he has reached the conclusion that there is some specific substance in the blood-serum of cancer-bearing individuals, probably absorbed from the cancer itself. Following this conclusion, he has applied the method of showing the difference in the anaphylactic reaction of normal and cancer blood-serum to the diagnosis of cancer. In all of the cases examined the margin of error was 8 per cent.; therefore, the correct diagnosis was made in 92 per cent. Dr. Ransohoff sums up as follows: From tests made it seems possible that the anaphylactic test may prove an aid in the early diagnosis of cancer. Five early cases which gave positive tests were par-

ticularly significant. The margin of error (8 per cent.) is not large enough to invalidate the test. The most valuable single factor was the uniformity of negative tests in non-malignant cases. Hence the conclusion was reached that there is no possibility of making a diagnosis of cancer when cancer is not present. A positive diagnosis seems absolute evidence of the presence of cancer. Other workers are urged to give the test which he exploits a further trial.

GOLD CHLORID TEST.

DRS. GRULEE and MOODY, Chicago (*Journal A. M. A.*, July 5), discuss the gold chlorid test on the cerebrospinal fluid in congenital syphilis. They start out by dogmatically saying that anyone who has had much experience with the Wassermann reaction and other laboratory tests as applied to the diagnosis of congenital syphilis must feel that such reactions are entirely inadequate. "And," they add sententiously, "this especially applies to those cases in which they are most needed; that is, in many young infants." They conclude with the statement that one must not lose sight of the fact, however, that laboratory tests of the nature of the gold chlorid reaction must always be regarded only as an aid to clinical diagnosis.

EPINEPHRIN IN KIDNEY HEMORRHAGE.

HERMAN R. KRETSCHMER, Chicago (*Journal A. M. A.*, July 5), reports remarkable results obtained in treating a case of profuse painless hematuria by means of injections of epinephrin directly into the pelvis of the kidney. The advantages of this treatment, he says, are as follows: First, condition of the patient's urine may be studied at the time when it is free from large quantities of blood; second, the patient may be put on a general tonic treatment besides the epinephrin treatment until such an improvement is reached as will render operation a safe procedure; third, it may be a means of avoiding nephrectomy.

PURPURA IN NURSING BABY.

IRVING M. SNOW, Buffalo (*Journal A. M. A.*, July 5), reports a rare type of purpura urticaria as well as angioneurotic edema of the feet and hands and other regions. The case is reported in full, not because it is unique, but because it is a clear-cut and simple case of purpura and angioneurotic arthritic edema developing in a naturally healthy baby thriving on its mother's milk. The usual nomenclature and classification of the disease is faulty and leads the inquirer into dire confusion. Nothing definite is known of the etiology. Some authorities claim bacterial infection; others ascribe the symptoms to systemic intoxications of undiscovered origin. Both causes may undoubtedly produce the same lesion, but why a healthy breast-fed baby should develop these symptoms and then recover so quickly he is unable to explain.

COUGH.

G. D. BLACKWOOD, Philadelphia (*Journal A. M. A.*, July 5), says that anything that will relieve the

troublesome night cough of phthisis is of value. An intelligent patient of his, who suffered thus, called his attention to the fact that his cough was much relieved and his nights were more comfortable when he took a dose of aspirin in the evening. He has used this observation in several other cases and the patients have always reported favorable results. He now frequently advises patients with advanced pulmonary tuberculosis to take from 5 to 10 gm. of aspirin when they are troubled with an excessive cough at night. The smaller dose is often sufficient and not so liable to cause night sweats. He had not seen this observation before reported in medical literature and therefore advises a trial of the remedy, when local or postural treatment of the patient is not successful, before resorting to opiates.

ACTIVITY OF ERGOT.

A. C. and J. P. CRAWFORD, Stanford University, Cal. (*Journal A. M. A.*, July 5), have investigated the cock's-comb test of the activity of ergot preparations, that is, the bluing of the comb by injection of ergot, and report their experiments. These were made with various chemical constituents which have been suspected of activity in this complex drug. Those found active as regards this test are ergotoxin, beta-aminazolyethylamin, the last of which is probably always present with a positive test. It is interesting, they say, to note that this substance, which produces vasodilatation in carnivora and a fall of blood-pressure in cocks, and paralydehyd, which in large doses also dilates the vessels, caused bluing of the comb. While, on the other hand, the vasoconstrictors, such as tyramin, iso-amylamin and epinephrin, did not cause bluing, except the latter, and then it occurred late and after the vasoconstriction had begun to subside. If we accept the view that much of the pressor activity of ergot is due to parahydrophenylethylamin and that this pressor action has therapeutic value, and that this amin will produce uterine contractions, then it follows from our experiments that the cock's-comb test cannot be an accurate test for the full physiologic activity of ergot, but it may be of value for determining the presence of ergotoxin or beta-aminazolyethylamin. The question to be decided, is whether or not we shall standardize for ergotoxin alone. This cannot be fully settled until we know more of the therapeutic value of the ergot constituents, and in what relative proportions they should occur. Fluid extract of ergot was tested many times on cocks, but bluing, as far as they remember, never immediately followed, which would indicate that it contained little if any beta-aminazolyethylamin, so that for practical purposes we probably have to consider only parahydrophenylethylamin and ergotoxin. The former has not been found to produce abortion in pregnant animals, so that if it is an intensifier of ergotoxin we have only the latter to consider in the essaying of the fluid extract. They conclude by saying: "Perhaps later experiments may show that we may be able to reach a satisfactory conclusion as to the full physiologic activity of ergot preparations by determining the nitrogen content of the alkaline-ether shaking."

SURGERY OF THE THYROID.

C. H. MAYO, Rochester, Minn. (*Journal A. M. A.*, July 5), gives a summary of the observations on

5,000 operations on goiters made during the last twenty-five years at the St. Mary's Hospital, Rochester. The occasional large goiter of the cretin has but little active parenchyma and should be removed. He has not seen any permanent success from transplantation in these cases. In operating exposure of the left recurrent nerve is not necessary for the experienced operator unless the thyroids have displaced the nerve, and scar tissue from its too free exposure may have bad effects. Intrathoracic goiters and deep substernal ones are of serious import and are found about once in fifty operations. Slight substernal projections are much more frequent. While much has been erroneously attributed to the parathyroids they are worthy of much serious consideration by the operator. Normally there are four and they are quite subject to imperfect development through congestive conditions at birth. Since only one or two may be active they should be avoided in operating by preserving the posterior capsule, especially if both the thyroids are operated on, and it is advisable on account of the difficulty of their identification to preserve all small gland-like bodies beneath or connected with the posterior capsule. Treatment, however, of operative tetany with calcium lactate and also beeves' parathyroid with thyroid extract has been very effectual. Their experience at St. Mary's with this disease has been limited to one mild temporary case. As regards the nonsurgical treatment, there is no doubt but that many goiters, especially of the adolescent type, undergo a natural resolution, and this is true also of congestions and enlargements during pregnancy. The iodine treatment may have a favorable effect in young patients, but not so often after thirty. Recent experience seems to indicate the use of thymol, asalol and iodine as intestinal antiseptics. The thyroid gland extract is uncertain, but seems to have produced favorable results sometimes in the early treatment. In exophthalmic goiters temporary improvement has followed the use of the X-ray. The cytolytic action for specific action on the thyroid have not fulfilled expectations. In operating the best exposure is to be obtained through a transverse incision low in the neck, and if further exposure is needed the sternohyoid may be sectioned high in the exposed area. In simple goiters it is best to extirpate a greatly enlarged lobe. If both lobes are symmetrically enlarged, division of the isthmus with double resection of the gland is indicated for the best cosmetic results. Mid-line and encapsulated adenomas should be enucleated with division of isthmus, lateral encapsulated adenomas may be enucleated or the whole extirpated. Symptoms of hyperthyroidism indicate extirpation, but in severe cases, acute attacks or relapses, the conditions should be considered medical until improvement occurs. Mayo mentions here the boiling water treatment of Porter as possibly of value. During the first three or four months of the symptoms extirpation is safe, as the heart is not dilated. If dilated over an inch, primary ligation of the superior thyroid vessels is indicated, to be followed four months later by extirpation. After the first year a much smaller percentage of cases calls for primary ligation. Excluding the malignancy cases the mortality of goiter operations is very low, but it increases with delay. The results of operating on simple goiters are very satisfactory and in hyperthyroidism about 70 per cent. are cured and the remainder are likely to be more or less benefited. With patients in good general condition a general anesthetic, such as ether by the drop method, is preferred. Patients suffering from grave complica-

tions can be carried through extensive operations, under local anesthesia with novocain, and a combined local and general anesthesia as advocated by Crile may be sometimes of advantage.

TUBERCULOSIS.

The belief that the faucial tonsils may be a point of entrance of tuberculous infection is combated by E. F. INGALS, Chicago (*Journal A. M. A.*, July 12). From a study of 25,000 thoracic and throat cases carefully recorded he comes to the conclusion that there is no direct relation between the tonsils and pulmonary tuberculosis. Dr. W. S. Brackin, one of his associates, employed all his spare time for several months in going over these records with the assistance of other physicians and analyzing the findings. Over 10 per cent. of the 25,000 cases were tuberculosis. He took at random one hundred cases thoroughly recorded, giving a fair average of the whole. From the records of non-tuberculous patients, with various diseases, such as functional organic disease of the heart, asthma, simple bronchitis, pleurodenia, emphysema, pharyngitis, rhinitis and laryngitis, he took at random one hundred other records for control. These were all private patients and the records were far more complete than those of hospital patients. His analysis shows that 26 per cent. of the tuberculous patients had some macroscopic change, in the tonsils varying from slight enlargement to marked hypertrophy, ulceration, etc. In only 4 per cent. was there any record of cervical adenitis and in only one of these was there any change in the tonsils, which were slightly enlarged. Among the control cases 16 per cent. of the patients had enlargement or other disease of the tonsils and not one of them had cervical adenitis. Tonsillar disease seems much more frequent among the non-tuberculous than in the tuberculous patients, while cervical adenitis, comparatively infrequent in tuberculous patients, is much less common in non-tuberculous ones. Ten or fifteen years ago it was commonly believed that disease of the tonsils was a frequent cause of pulmonary tuberculosis but later research seems to have proved that tubercle bacilli may pass through the tonsils without injuring them and cause disease of the cervical lymph-nodes. This investigation shows that there is no direct connection between the cervical lymph-nodes and the pulmonary lymphatics and, therefore, lung involvement associated with cervical adenitis must be a systemic infection rather than a result of the lymphatic disease. From a thorough study of the literature and his own records he accepts as correct the view of Jonathan Wright that there is no direct relation between the tonsils and pulmonary tuberculosis.

PNEUMONIA.

The apparently increasing mortality from pneumonia of late years is noticed by S. SOLIS COHEN, Philadelphia (*Journal A. M. A.*, July 12), who calls attention to a treatment with a much reduced mortality, systematically carried out in two hospitals, the Jefferson and Philadelphia General Hospital. Apart from fresh air, dependence has been placed first on the effective use of massive doses of quinin. The most potent preparation, namely the very soluble double chlorid of quinin and urea introduced intramuscularly in a 50 per cent. solution. Second, the

hypodermic injection of cocain hydrochlorid solution, or of an extract of the posterior lobe of the pituitary body for the maintenance of blood-pressure. Third, in cases of prolonged fever, delayed resolution or tardy convalescence, the injection of bacterins (pneumococcus or "mixed" vaccines, personal or stock) has been resorted to to expedite recovery and apparently with good result. Further experience is needed, however, before positive statements can be made. The details as to the administration of the remedies are given. The dosage of the quinin salt is from 15 to 25 grains and 15 grains every third hour after, till temperature falls and stays down below 102.2 F. One half grain of cocain hydrochlorid or of caffeine (sodiosalicylate) or 1 c. c. of pituitary liquid or 1 c. c. of the 1:1000 solution of the posterior pituitary principle is given with the first quinin dose and repeated likewise every third hour until the systolic blood-pressure curve in millimeters of mercury taken in the arm rises and remains above the curve representing curve frequency in beats per minute. No invariable maximum limit has been fixed to the number of injections of quinin or pressor substances, but it has not been considered best to continue them beyond the first twenty-four hours and rarely as long as this. Where the desired effects have not been reached by that time, the interval between injections has been increased to six hours. In general the idea is to give as much quinin as can be borne in the first forty-eight hours and as little of the pressor drugs as is needed to maintain the systolic blood-pressure a safe distance from the pulse-rate. These directions apply to moderately strong adults and the good results are shown in three tables. Until recently this treatment was reserved for cases calling for active intervention and other patients were permitted to go without it. Statistics are based, therefore, on cases from the moderately severe to those of the very worse type. At present the author gives the first dose of quinin to every patient and the result has been that the cases have become so much milder that they require no further treatment beyond good nursing. As regards the duration of this treatment, the quinin is seldom continued beyond seventy-two hours and the number of injections ranges from one to fifteen and is ordinarily five or six, usually of about 1 gm. each. The number of cocain and pituitary injections ranges from one to twenty and will average three and four in each case and each case must be judged by itself. The only general rule is, enough to produce the desired effect and no more.

THE HUMAN STOCK SHOW.

Under this heading, AGNES DITSON, Denver (*Journal A. M. A.*, July 12), describes the methods of the so-called "Baby Shows," "Better Babies' Show," "Baby Health Contest," which have been carried out in various parts of the country. They bear the same relation to race improvement that the live stock show bears to stock breeding, hence the above title. Such shows bridge the gap between scientific and practical eugenics and euthenics. The statistics obtained are of scientific value and they are of practical value by instructing the laity in the fundamental principles of eugenics and euthenics. Most of the parents are intelligent and they are fortunate if their baby does not win a prize because by seeing the score cards they can see wherein it is deficient and how to remedy the defects. They can study hygienic exhibits, receive educational leaflets and charts show

ing hereditary transmission and obtain a start in utilizing the libraries on these subjects. All these things have been observed to follow such shows but, on the other hand, their popularity attracts selfish commercial advertisers, food manufacturers, etc., and if these shows develop into merely prize-winning contests without the educational features they may be harmful. It is time they came under scientific control and should be fostered by government as a matter of social economy. It rests with physicians to bring this about and an organization is now being formed for which the name of National Human Stock Show Association has been proposed. The part of the organization which will coordinate the work of the physician will be first in the field so as to direct the physicians who will be concerned in the shows which are to be a feature of the State Fair next fall. A first step toward uniform action is the adoption of a better scoring system as those which are in use have some serious faults. One which has been worked out from that used in Denver, taking in points of merit from others, is presented. Its temporary adoption is advised and Dr. Ditson suggests that original filled forms or duplicates be sent to her with suggestions for revision. These will be summarized and voted on. In its final form the system will include definite standards, charts, etc., and a Mendelian law chart.

SKIN COMPLICATIONS OF DIABETES.

BURNSIDE FOSTER, St. Paul, Minn. (*Journal A. M. A.*, July 12), thinks that many general practitioners fail to appreciate the close relationship of the skin complications to diabetes of which they may often be the first symptoms. Among these he enumerates dryness of skin and pruritis, boils and carbuncles and mal perforans which last occurs in about 3 per cent. These are the commonest disorders. Psoriasis has been reported and he has seen it once, but considers it only a coincidence. Other skin affections are rare and he has had little experience with them. The early recognition is important since, while the ultimate prognosis is probably bad, there are few other such serious diseases which are more amenable to intelligent treatment, as regards duration of life and the comfort of the patient.

HYPERTHYROIDISM.

M. F. PORTER, Fort Wayne, Ind. (*Journal A. M. A.*, July 12), gives an account of his experience with the treatment of hyperthyroidism by boiling water injections. It is, he says, a safe procedure, as shown by his experience in over a hundred injections in twenty cases by himself and the testimony of others who have used the method and have been requested to report to him. The immediate effect of the injection is destruction of thyroid tissue and colloid, and this is continued further by the resultant formation of fibrous tissue. With the aid of local anesthesia the pain and discomfort are usually negligible and usually pass away in a short time. The twenty cases are reported and the technic described. In one the results are not known, but in others improvement occurred and four patients were cured, calling those cured who show no signs of continued hyperactivity of the thyroid. The experiments made on dogs by Dr. W. D. Gatch and others at the request of Dr.

Porter, are also given in the article. The facts, he thinks, seem to warrant the conclusion that the injection of boiling water into the thyroid is a safe and efficient method of treating hyperthyroidism and that it will prove of special value in cases in which thyroidectomy is contraindicated.

GASTROJEJUNOSTOMY.

J. B. DEEVER, Philadelphia (*Journal A. M. A.*, July 12), insists on the importance of early operation in cases of perforated or duodenal ulcer. This, while infrequent, is sufficiently common for every active practitioner to meet once or twice in the course of his practice. During the last ten years he has had thirty-six cases to treat and it seems to him that they have been more frequent in the latter part of the period, probably on account of more accurate recognition. He therefore goes into the diagnosis at some length. The leading symptom is pain; the leading sign rigidity, and the leading clue is a history of previous indigestion of ulcer type. The pain is sudden and violent and this sometimes disqualifies the patient from being able to describe it. Rigidity sets in at once and extreme tenderness is also immediate. The absence of history does not preclude the perforation but its presence is of great value. Shock has been observed but is not essential and may be slight or transient. Vomiting is almost constant and a valuable symptom. Temperature, pulse and respiration rate are very misleading and do not indicate the urgency of the patient's condition. Free gas in the abdominal cavity and obliteration of liver dulness should be stricken out of the text-books as signs of perforation. The leukocyte count is of some help, chiefly in differentiating non-inflammatory conditions like gastric crises and abdominal angina. Deever deprecates giving too much importance to it in the diagnosis. In treatment everything depends on promptness. If the perforation can be closed within the first twelve or eighteen hours a considerable percentage of recoveries can be looked for even by an inexperienced surgeon. After twenty-four hours the case is almost absolutely hopeless. In the twenty-six cases operated on by Deever there were eighteen gastric and duodenal ulcers and the only death occurred in the one case of over twenty-four hours standing. The treatment adopted was: (1) closure of the ulcer; (2) plication of the duodenum to obliterate its lumen and fortification of this area by covering with a gastrohepatic and gastrocolic omentum; (3) posterior no-loop gastrojejunostomy and (4) tube drainage of the pelvis through a suprapubic stab. The after-treatment consisted in the sitting posture, continuous proctolysis, prohibition of everything by mouth until peristalsis was reestablished as evidenced by auscultation and especially by the passage of flatus. The stomach-tube was employed freely for vomiting, regurgitation, or gastric distention. Experimentation with food was begun after the passage of flatus, beginning with albumin water. No purgatives were given, but a cleansing enema was given on the third day after operation. The results point to the value of gastrojejunostomy as a primary procedure in addition to the closure of the perforation in all but desperately toxic or shock cases and whenever the surgeon is sufficiently familiar with the operation to perform it. The slight prolongation of the operation is no contraindication and the danger of infection of the lesser peritoneal cavity has

been overrated. The primary gastro-enterostomy puts the parts at rest and favorably influences existing ulcers. In duodenal perforation any narrowing of the lumen is compensated for by the anastomosis. In the future in early cases with but little inodorous fluid Deaver proposes to omit pelvic drainage. The remote effects are also equally satisfactory, but he reserves this feature of the subject for a future communication.

GASTROSTOMY.

H. H. JANEWAY, New York (*Journal A. M. A.*, July 12), believes that gastrostomy is too often delayed in cases of inoperable cancer of the esophagus. Experience shows that the best results are obtained—the prolongation of a more comfortable life to the patient—by an early operation. The greatest danger from operation is leakage and it causes distressing excoriations. Janeway considers the Senn method of gastrostomy, on the principle of forming a cone-shaped circular valve protruding into the cavity of the stomach, the best; there is a tendency, however, for the valve to diminish in size and effectiveness. The forming of a gastric fistula which will not leak, nor discharge, nor spontaneously close, opening on the skin with a meatus-like orifice so that it can be used, or not, as desired, seems best. Janeway offers a method which he had independently devised which is very similar to that of De Page, but it calls for less plastic work and uses up less of the stomach wall. The principle, like that of De Page, is that of pulling out the interior wall of the stomach, nipple-wise and connecting with a tubular canal which is made by sewing up incisions made between clamps in the stomach-wall. The split rectus fibers of the external incision close around the canal and act like a sphincter. The author points out in detail certain advantages over De Page's method and says that he has performed this operation in five cases and always without inverting the proximal end of the new canal, leaving to the rectus fibers and the oblique direction of the canal the prevention of leakage. In four of the cases there has been no leakage and in the other it occurs only slightly, after severe exertion. The article is illustrated and the details of the operation are best understood by reference to the figures.

SALVARSAN AND PROFETA'S LAW.

A. RAVOGLI, Cincinnati (*Journal A. M. A.*, July 12), publishes an interesting case showing how the use of salvarsan had demonstrated the fallacy of Colles-Baumes' and Profeta's laws. The child in the case reported was born perfectly free from syphilis, though the mother later showed syphilitic symptoms. The opinion of Pollitzer that salvarsan kills the active spirochetes and spares the inactive ones is supported. The mother had conceived and carried to full term the child free from syphilis while she still had spirochetes in her system which later became active. In the father, who was originally infected, they had been destroyed and the Wassermann tests were negative as they were in the child. The case gives no support to the idea of Matzenhaur that the fetus receives infection from the mother only, but rather supports that of Hainiss that the cause of hereditary lues is the infected sperm. The child

while born healthy was afterwards infected with an initial lesion followed by secondary symptoms from the mother.

MESENTERIC CYSTS.

The report of a case of a sanguineous cyst of the mesentery of the small intestine is published in the *Journal A. M. A.*, July 12, by C. H. FRAZIER, Philadelphia, who remarks that they are probably more uncommon than similar lesions of other structures of the abdominal cavity. The difficulty of differential diagnosis in these cases, however, and the severe results that they may cause, if neglected, make it advisable to give them more thought and attention than has heretofore been given. In the case reported the cyst and adherent loop of bowel were excised and the severed ends of the small intestine were united with the Murphy button. These cysts are usually oval in shape, though sometimes spherical as in the case described, and are generally found not far from the ileocecal valve, though occasionally elsewhere. Most of them are freely movable. Their growth is rapid and may be accelerated by accidents causing hemorrhages in the cyst. Percussion reveals a dull sound and an area of resonance around the mass and the cysts can usually be revealed by palpation. Other symptoms may be lacking and the growth revealed only at autopsy, but usually they manifest their presence by digestive disturbances and pain, simulating that due to intestinal obstruction. If intervention is delayed the patient may die of inanition. Radical removal is the best treatment when feasible, but when symptoms are acute incision and drainage is simpler and more liable to relieve as it is more quickly done. Aspiration is obsolete. The classification is discussed and Frazier follows Moynihan in considering the cysts of varied origin, including hydatids and dermoids as well as sanguineous and lymphatic cysts and other abnormalities.

CIRCUMCISION TUBERCULOSIS.

L. EMMETT HOLT, New York (*Journal A. M. A.*, July 12), reports a case of tuberculosis transmitted by ritual circumcision. A healthy child born of healthy parents, breast-fed, developed local symptoms of infection within a few days after the operation and these persisted, being followed after a few weeks by general infection continuing until death and practically involving every organ in the body. The necropsy findings point strongly to a spreading of the infection beginning at the wound through the lymphatics and afterwards to a general blood-infection. The rabbi who operated had a general tuberculous appearance though without physical signs in his lungs. In his sputum two acid-fast bacilli resembling tubercle bacilli were found. Holt gives a summary of similar cases. In a very large proportion of them the first diagnosis was syphilis and time was wasted with specific treatment. It is Holt's belief that syphilis is less often acquired in this manner than is tuberculosis and the latter should be first suspected. The facts lead him to emphasize the statement made by the late Professor Maas, the German surgeon, that "it is the duty of the physician to raise his protest against the performance of ritualistic circumcision in every case."

EMMENAGOGUE OILS.

After reporting a fatal case of pennyroyal poisoning in which the patient had taken thirty-five pills to produce abortion and reviewing the literature of similar cases, D. L. MACHT, Baltimore (*Journal A. M. A.*, July 12), reports a study of the various effects of the so-called emmenagogue oils on a cat's uterus suspended in a chamber filled with Locke's solution at a constant temperature of 38 C. through which a constant stream of oxygen was bubbling. The freshly exposed organ was put under these conditions in a highly tonic condition gradually subsiding for the first fifteen or thirty minutes, after which it is ready for testing. He tested in the above way the actions of the following oils: "oleum hedeomae (pennyroyal), oleum sabinae (savine), oleum tanacetii (tansy), oleum rutae (rue), oleum thymi (thyme), oleum terebenthinae (turpentine) and apiol." All of these substances, even in small quantities, have absolutely no stimulating effect on the uterus. The most toxic are pennyroyal, tansy and apiol but the difference between them in this regard is only in degree. Macht is led by these experiments to the following conclusions: "1. The so-called emmenagogue oils are by no means innocuous substances. 2. They have absolutely no direct stimulating action on the uterine contractions or tonicity. 3. On the contrary, they inhibit such contractions, and even paralyze the uterus. 4. Their action as abortifacients, if they act as such, is no different from that of any other powerful systemic poison, such as phosphorus, or arsenic. 5. They have very little, if any, therapeutic value and do not deserve a place among the official pharmacologic preparations which many of them hold."

DECREASE OF BIRTHS IN BERLIN.

The director of the Berlin statistical bureau has just made a report as to the decrease of births in Berlin in 1911. In this year there were born in Berlin 44,834 children—a number which already in 1876 was surpassed by 1,464, that is at a time when the population amounted not quite to half of the present. As reckoned per 1,000 of population, the number of births amounted at that time to 47.19, while in 1911 it was 21.64—a decrease of not less than 54.1 per cent. Comparing the figures of legitimate and illegitimate children, the number of the illegitimately born has decreased. But this last consideration is of small consequence as regards the real point at issue. It is only necessary to point out that there is no reason for supposing that the number of illegitimates is decreasing. Investigations of the figures gives the following results: The fertility of marriages in Berlin has been decreasing since nearly the middle of the 70's; in 1910 it amounted to 37.7 per cent. of the maximum reached in 1876. A characteristic feature is the marked

decrease of mothers who have borne three or more children, in the last few years. The decrease in the number of births in the last five years was least among the younger married women capable of bearing children, and greatest among the older. As regards the different parts of the city, those populated mostly by working classes show the greatest proportional decrease of legitimate births. These figures are reported by the Berlin correspondent of *The Journal of the American Medical Association*.

THE SPECIALIST.

The hurriedly made specialist in medicine—"the egregious expert,"—to modify slightly a familiar and at present popular proverb, believes and acts on the principle that nothing succeeds like excess—excess of refinement in specialism. The narrow specialist, exotically grown and narrowly confined, cannot last and even now is on the wane. Feeling that he is marching in the footsteps of natural advance when he decides to become a specialist, he believes that, like the cell, the more highly specialized the more advanced the organism. As he proceeds in experience his views become more and more narrow. He forgets that no group of cells acts independently. "The man who lives and moves and has his being only among experts of his own type is merely an example of frenzied isolation." The man who goes abroad for three months and thenceforth sets himself up in the temples of the experts is said to be "largely a bearer of other men's responsibility—or a scapegoat." But he is unnecessary. While it is true that "no man can study medicine in its entirety," and "surgeons, physicians, eye-men, gynecologists, and so forth, we must have," each is a part of a whole, says *The Journal of the American Medical Association*, and no one should attempt to dominate the whole. The refinement of specialism leads to narrowed efficiency and thence to the vanishing-point of practical effectiveness. Too close concentration will lead to elimination. Let the narrow specialist know his limitations and keep to his place. His opinions should be treated gravely as such and not as absolute, proved facts. He makes an excellent servant but a bad master.

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THERAPEUTIC NOTES.

THE PALID SCHOOL GIRL.—In view of the modern methods of education, which force the scholar at top speed, it is not to be wondered at that the strenuous courses of study prescribed for the adolescent girl more than frequently result in a general break down of both health and spirits. Each winter the physician is consulted in such cases and almost always finds the patient anemic, nervous and more or less devitalized. In most instances a rest of a week or two, together with an efficient tonic, enables the patient to take up her school work again with renewed energy. Pepto-Mangan (Gude) is just the hematinic needed, as it acts promptly to increase the red cells and hemoglobin, and to tone up the organism generally. It is particularly suitable for young girls because it never induces or increases constipation.

A THERAPEUTIC POINT WORTHY ATTENTION.—A feature that has contributed to make Cord. Ext. Ol. Morrhuæ Comp. (Hagee) so widely popular, is the ease with which it is tolerated during the hottest kind of weather. This is a marked advantage and one well worthy the physician's consideration, for the need for a tissue food such as Cord. Ext. Ol. Morrhuæ Comp. (Hagee) may be just as pressing in an individual case in summer months as during the coldest weather.

By the same token this product is especially well adapted to the needs of those with a delicate gastric apparatus.

A SYSTEMIC BOOST.—It is safe to say that the average physician is called upon to prescribe a tonic more frequently than any one other form of medication, unless it be a cathartic. Patients who are patients solely because they are tired, "run down" and generally debilitated, are constant visitors at the physician's office. Such individuals need something that will boost them up to their normal point of resistance and then hold them there: in other words, not a mere temporary stimulation, with secondary depression, but a permanent help to the revitalization of the blood and a general reconstruction. Pepto-Mangan (Gude) is not only prompt in action as an encourager of appetite and better spirits, but is also distinctly efficient as a blood builder and systemic reconstituent. It is pleasant, non-irritant, free from constipating effect and does not stain the teeth. It is thus a general constitutional tonic of positive service in all conditions of general devitalization.

MEDICAL SUPERVISION OF FACTORY WORKERS.

Many large factories and industrial plants have for a number of years furnished surgical services to employees injured during working hours. Only a few, however, have as yet attempted to look after the physical condition of employees, with a view to reducing the amount of sickness and so decreasing the lost time. In

a recent issue of *The Journal of the American Medical Association*, Dr. H. I. Clark reports the plan followed in a manufacturing plant at Worcester, Mass., in which about 1,200 men and women were employed. A small but well equipped hospital was fitted up, an examination of each employee was made with a record of the results. Foremen were directed to send all employees unable to work to the hospital for examination. If one was found unable to work he was advised to go home and to call his own physician. A record was kept of the time lost from sickness. From the results of sixteen months' work Dr. Clark draws the following conclusions:

It is possible for a simply equipped medical department to control with success the sickness and disability from accident in a large factory.

A complete physical examination of all employees is perfectly possible and of great advantage to employer and employee.

A system of prophylactic treatment in cases of sickness and accident will materially lessen the amount of sickness and decrease the loss of time.

The sanitation of a large factory and all matters pertaining to the general health of the employees can best be maintained by a medical department.

Far from exciting distrust and antagonism, a shop hospital, run on the lines laid down, will create a feeling of good will between employee and employer.

FRESH BREAD FORTY HOURS OLD.

Bread kept under ordinary conditions rapidly becomes stale or dry, so that persons who do not fancy the staff of life in that particular physical state must have bread within a few hours after it is baked. A method of preventing bread from becoming stale would therefore be an epicurean and economic advantage; it would not only contribute to the gustatory requirements of the fastidious, but also prevent considerable loss to the baker and the consumer. In a recent issue of *The Journal of the American Medical Association* appears the statement that Dr. J. R. Katz of the University of Amsterdam has shown that bread kept at either a low or a high tempera-

ture is preserved fresh for some days at least. In his experiment bread was kept absolutely fresh for more than forty hours at a temperature of 140 F. (60 C.). At a temperature of from 86 to 104 F. (30 to 40 C.), it became only half stale, and became fresh again at a temperature below freezing. Dr. Katz therefore recommends that bread be kept at a temperature of 122 F. (50 C.) and upward, which will keep the crumb fresh, while the crust will become soft by the absorption of moisture. If the bread is put back into the oven for a short time the water will be driven off from the crust and the bread will become crisp again. The bread may also be kept in cold-storage rooms at sufficiently low temperatures, when if the air sufficiently dry the crust will remain hard and crisp, so that it will retain all the characteristics of new bread for a considerable time.

PHILOSOPHY OF LIFE.

Did it ever occur to you that a man's life is full of crosses and temptations? He comes into the world without his consent and goes out of it against his will, and the trip between is exceedingly rocky. The rule of the contraries is one of the features of the trip.

When he is little, the big girls kiss him; when he is big the little girls kiss him.

If he is poor, he is a bad manager; if he is rich, he is dishonest.

If he needs credit, he can't get it; if he is prosperous, everyone wants to do him a favor.

If he is in politics, it is for graft; if he is out of politics, he is no good to his country.

If he doesn't give to charity, he is a stingy cuss; if he does, it is for show.

If he is actively religious, he is a hypocrite; if he takes no interest in religion, he is a hardened sinner.

If he gives affection, he is a soft specimen; if he cares for no one, he is cold-blooded.

If he dies young, there was a great future before him; if he lives to an old age, he missed his calling.

If he saves money, he's a grouch; if he spends it, he's a loafer.—*Medical Sentinel*.



Glyco-Thymoline is of benefit for teething babies; a little rubbed on the gums, rapidly reduces the inflammation and conserves the little one's comfort.

Used for flushing the colon, it eliminates all septic matter, preventing autointoxication and reducing the temperature.

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HOW LONG TO SLEEP.

A writer in the "*Western Medical Review*" recently expressed the opinion, that although sleep is necessary as a rehabilitator and energy restorer, most people sleep too much for the good of their health. His views with regard to young children are that even infants at the breast are allowed too much sleep; that they need not only time to sleep, but time to wake, if their intellect is to be awakened. The tendency to sleep shown by children and the uneducated is explained on the ground that their psychic world is so poor that it is almost impossible for them to take any interest in their own thoughts and ideas. It is considered that even during the first four or six weeks of life there ought to be two waking hours during the day, the waking time to be increased as the baby grows. All methods of putting children to sleep artificially by means of monotonous sensations are strongly censured, including the crowing of lullabies and the rocking of babies in cradles or simply in the arms. The latter procedure is said to produce sleep partly because consciousness is fatigued by a series of monotonous sensations and partly because at the same time artificial anemia of the brain is induced. The approximate period of sleep necessary for children at different ages is given: between one and two years from 6 to 8 waking hours; two and three years, 7 to 9 waking hours; three and four years, 8 to 10 waking hours; four and six years, 12 to 14 waking hours; nine and thirteen years, 14 to 16 waking hours.—*Exchange*.

Pyelitis of the pseudomalarial type may be divided into acute and chronic. The acute cases may be of short duration or last for weeks while the patient is being dosed with quinin. The chronic cases give rise to lesser symptoms, such as periodic aching of the limbs, chilly feelings, night sweats, etc. The urinary findings may be insignificant and catheterization is absolutely necessary in women to avoid contaminating cellular elements from the external genitalia. The real difficulty in chronic cases is not so much in excluding malaria, which can be done by a blood

examination, as in excluding pulmonary tuberculosis, which is always suggested by the clinical history. In acute pyelitis the paroxysms may be identical with those of malaria. Chronic pyelitis gives symptoms commonly attributed to chronic malaria, which is not a common trouble unless in neglected cases. While the clinical features of malaria and pyelitis may be almost identical, the differentiation is not difficult.—*Medical Times*.

In infantile eczema allay the weeping with astringents or a drying powder. In the acute form zinc paste and starch removed the third day with olive oil is of value, or Jadassohn's lotion of zinc oxid and starch, five drams each; glycerin, three and one-half drams; distilled water, three ounces, applied with a large brush several times a day. The lead-water liniment of Boeck is sometimes to be preferred. Sometimes all these methods fail and tar has to be used to allay the itching, but this only when absolute dryness is established and hyperemia not prominent. A less irritant action is possessed by liquor carbonis detergens, which can be used in an ointment, mild at first, and afterwards stronger, and in solution. One may be forced to go still further with stronger preparations of tar and phenol, but great caution should be exercised in their employment.—*Medical Times*.

A SIMPLE METHOD OF PURIFYING ALMOST ANY INFECTED WATER FOR DRINKING PURPOSES.

Dr. A. G. Love, in the *Military Surgeon*, September, 1911, gives the following method of purifying infected drinking water:

1. Take a teaspoonful of chloride of lime, containing about one-third available chlorine, and remove the excess of powder by rolling a pencil or other round object along the top of the spoon, or by flattening it with a penknife blade, so that the excess will be squeezed off.

2. Dissolve the teaspoonful of chloride of lime in a cupful of water, making sure that all

lumps are thoroughly broken up, and to it, in any convenient receptacle, add three more cupfuls of water.

3. Stir up the mixture, allow to stand for a few seconds in order to let any particles settle (this stock solution if kept in a tightly stoppered bottle may be used for four or five days), and add one teaspoonful of this milky stock solution to two gallons of the water to be purified in a pail or other receptacle. Stir thoroughly in order that the weak chlorine solution will come into contact with all of the bacteria, and allow to stand for ten minutes. This will give approximately one-half part of the free chlorine to a million parts of water, and will effectually destroy all typhoid and colon bacilli, or other dysentery-producing bacilli in the water. The water will be without taste or odor, and the trace of free chlorine added rapidly disappears.—*Texas State Journal of Medicine*.

Breathes there a Doc with soul so dead, who never to himself hath said: "Dadburn it all! From this time on, I'll make no calls without the Spon! My ancient hoss I'll give a rest, unless I am with fees more blest. This thing of getting up at night, and riding miles to some poor Blight, without a cent to buy the feed consumed alone by my old steed, gives me a Pain.

"For years I've pandered to the whims of half a thousand or more Slim Jims; neglected my wife and missed by the kids, getting my fees in only small dribs. From now on my work will be wholly cash, and I'm through with the helping of poor white 'Trash.'" * * *

But at 2 a. m. the door-bell sounds, and you're out on your feet in a couple of bounds. "Hurry up, Doc. It's pneumonia, I guess. Move up quick if you've got to dress. I haven't the money, but I'll pay you soon—I've got some coming the first of June." You console the fellow the while you dress. The fee? Oh no, you can not press. His wife is ill, and he's come to you for help in his need—your friendship's true.

Your warm home you leave and clatter away, and when you return it is light and broad day. You have shunted the hand of the Reaper aside;



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man's skill and worth have been met and tried. You may get your pay, and again you may not, but just at the present it's far from your thought. Poor Doc! you are richer than thousands of men who figure their worth in bank books with a pen.—*Medical Brief*.

Typhoid vaccine as prepared at present—by heat—is not perfectly reliable after a few months and should never be used if a year old. The blood test by which the physician is to test the results of his vaccination is the Widal reaction, which ordinarily becomes positive in from five to ten days after the first dose and grows stronger with the second and third doses. Maverick reports a case (*J. A. M. A.*) in which it failed to appear in a patient after successive vaccinations, though the same vaccine was given to four of his brothers with positive results. Another vaccine from a perfectly reliable source was followed by no marked agglutination, though slightly less motion. The question whether this patient is immune or hypersensitive is interesting. The effect of each vaccination on the blood evidently caused a slight increase in the agglutinins and it is reasonable, Maverick thinks, to admit that continued inoculations might have produced a good Widal.—*Medical Times*.

THE DOCTOR'S DECALOG.

1. Don't waste your time. Be doing something every minute.
2. Strive to make a good impression. Dress well. Learn to talk well. Be a man among men.
3. Be a courteous professional gentleman, but also a square-deal-giving and a square-deal-demanding business man.
4. Buy books. Subscribe for the journals, and write for them. Attend the societies, and let your voice be heard.
5. Equip yourself with every material thing that will increase your diagnostic and therapeutic power.

6. Don't be ashamed to consult with other men. Give them of your knowledge, and extract from them every fact of possible value to you.

7. Be a real and not a pseudo investigator. Take nothing on faith, but refuse nothing because it is condemned.

8. Make every case a subject for real research work, and leave no fact concerning it unknown that is capable of being uncovered.

9. Shun quackery as you would poison; but ascertain its sources of strength, adding the latter to your store.

10. Wear no man's collar. Let truth, honor and manhood be your only masters.—*American Journal of Clinical Medicine*.

THE SECRET REVEALED.

One day a pastor was calling upon a dear old lady, one of the "pillars" of the church to which they both belonged. As he thought of her long and useful life, and looked upon her sweet, placid countenance bearing but few tokens of her ninety-two years of earthly pilgrimage, he was moved to ask her: "My dear Mrs. S., what has been the chief source of your strength and sustenance during all these years? What has appealed to you as the real basis of your unusual vigor of mind and body, and has been to you an unfailing comfort through joy and sorrow? Tell me, that I may pass the secret on to others, and, if possible, profit by it myself."

The old lady thought a moment, then lifting her eyes, dim with age, yet kindling with sweet memories of the past, answered briefly: "Victuals."—*Exchange*.

Thymol is used in Italy to advantage in the treatment of hookworm disease. One writer reports giving 2 gm. every two hours until six doses had been taken, always in capsules, without serious disturbance. These doses are large, however, and while we believe the drug possesses unusual efficiency in hookworm disease, we suggest much smaller amounts.—*Medical Times*.

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A party of Leland Stanford students paused on the rim of the crater of Vesuvius. As they peered into the seething mass of horror below them one exclaimed in an awed tone: "Don't that beat hell?"

Some Englishwomen were standing near and evidently overheard. One of them remarked to the other in her well-bred, distinct voice: "Isn't it remarkable how widely these Americans travel!"

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SCIENTIFIC TERMS.

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Prophylaxis is prevention
Of disease;
Sterilize is the intention
To avoid the apprehension
Of blood poison, an invention,
If you please.

It is an inflammation,
Anywhere;
It may be of short duration,
A bad or good indication,
And betimes a revelation
That is rare.

Cocci is inoculation.
They are germs;
Proven by examination—
Pathologic—the relation
Of deaths is an inundation,
From the worms.

To determine diagnosis,
A disease;
The prediction, or prognosis;
Poisoning is toxicosis,
Death of tissue is necrosis,
Big words these.

—*Med. Herald.*

A FAMILY AFFAIR.

When a Toronto man engaged a physician to attend his wife in her approaching confinement, he was requested to send in for examination the usual sample of urine. A few evenings later he reappeared with a quart beer bottle full.

"I only wanted a small bottle, about two or three ounces," said the physician on beholding the large bottle.

"Well, I thought I would bring you enough. Can you examine it now?"

"Yes."

A little later: "Is it all right?"

"Yes."

"No Bright's disease?"

"No. It's all right."

"Could I use your telephone to phone my wife?"

"Yes."

"Hullo! Is that you, Rebecca?"

"——"

"You're all right."

"——"

"I'm all right, too. Ikey's all right. Jackey's all right. Rachel's all right."

The physician sighed as the mystery of the full bottle was laid bare.—*Journal A. M. A.—Med. Brief.*

INCREASE OF LUNG CAPACITY BY EXERCISE.

According to careful tests made in a gymnasium in Bonn, the capacity of the lungs was increased by regular exercise from 3,388 cubic centimeters or 207 cubic inches to 3,803 cubic centimeters or 232 cubic inches; an increase of 12.14 per cent. In Stuttgart the average increase was found to be from 3,833 cubic centimeters or 233 cubic inches to 4,290 cubic centimeters or 262 cubic inches, being 11.49 per cent. Among the members of the Berliner Ruder Verein (Berlin Rowing Club) the increase for the heavy crew was from 5,600 cubic centimeters or 352 cubic inches (3.12 per cent.); for the light crew from 4,700 cubic centimeters or 287 cubic inches to 4,875 cubic centimeters or 297 cubic inches, being at the rate of 3.72 per cent.—*Scientific American.*

When the abdomen is opened to discover the sigmoid, if it is not found at once, search should be made toward the median line.—*Am. Jour. of Surg.*

A subcuticular whitlow is often the superficial expression of a deep infection. After removing the raised epidermis carefully inspect the tissue beneath for a small opening. If this is neglected the process may speedily advance to the tendon sheath.—*S. S.*

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Official Organ of the Vermont State Medical Society.

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TABLE OF CONTENTS

ORIGINAL ARTICLES:—

- In Appreciation of a Great Teacher, Dr. Aloysius O. J. Kelly,
By W. R. Rowland209
- Malpractice, and the Doctor on the Witness Stand,
By Dr. Waldron B. Vanderpoel.....211

- The Comparative Value of Local Anesthesia and Nerve Blocking in Major and Minor Surgery,
By Dr. C. A. Pease.....213

EDITORIAL216

NEWS ITEMS219

AN EPITOME OF CURRENT MEDICAL LITERATURE...221

THERAPEUTIC NOTESxii

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SURGICAL SUGGESTIONS.

In trachelorrhaphy care must be taken not to close the cervical canal at any point.

When tuberculous involvement of the Fallopian tubes is evident to the naked eye, pan-hysterectomy should be performed.

Vaginal hysterectomy is more dangerous than abdominal hysterectomy when the uterus is adherent.

In case of primary hemorrhage, cut vessels which are not bleeding need not be ligated, provided the patient can be watched. When the vessel can not be tied in the wound, ligation in continuity is permissible.

The treatment of varicose veins is not completed until the surgeon has discovered the constitutional causative actor and advised its elimination.

In removing extensive varicose veins, the surgeon should bear in mind that two operators can accomplish twice as much as one.

Better than temporary ligation of a large vessel is the application of a soft clamp which can not damage its wall. In the absence of such a clamp an assistant may cause occlusive angulation by making gentle traction upon a ligation passed under the vessel.

After the ligation or occlusion of large veins, the important means essential to the re-establishment of the collateral circulation is the preservation in its best possible vigor of the arterial circulation.

Both ether and chloroform anesthesia have a hemolytic effect, which is followed by compensatory polycythemia. It is followed also by 30 per cent. increase in the leucocytes, which begins during anesthesia and lasts for about 24 hours. Leucocytosis is also induced by saline infusions and purgation.—*Medical Sentinel*.

SENATE DECLINES TO CONSIDER OWEN BILL.

The United States Senate recently, by a tie vote, refused to take up the consideration of the Owen bill. This does not finally dispose of the bill as it still retains its place on the Senate calendar and can be called up at any time and considered by a majority vote of those Senators present. As it is realized by those friendly to public health legislation that there is little chance of the bill passing the House at the present session, the tie vote on the question of its consideration can justly be regarded with satisfaction by the friends of a broader national health organization. It is generally understood that Senator Owen will introduce a bill at the next session of Congress, if the present bill does not pass, but it is highly probable that such a bill will be re-drafted and considerably modified. If this is the case, says *The Journal of the American Medical Association*, it is to be hoped that Senator Owen will go back to the original plan and draft a bill calling for a Department of Health, with a secretary in the cabinet. The growing realization of the importance of this subject and the increasing support for it show the educational value of the agitation which has extended over the last three years. The opposition has reached its high-water mark, and the false statements which were so widely circulated regarding the object of the measure and the purposes of its advocates have reacted. The Owen bills have made people think. If they will only think hard enough and long enough to realize the great importance of health conservation, the eventual, inevitable result will be the establishment of a national Department of Health. Nothing short of this should be the aim of those who appreciate the present public health conditions and the needs of the future.

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BLOOD PRESSURE IN MENTAL DISORDERS.

S. G. Longworth (*Brit. Med. Jour.*,) finds the maniacal and melancholic states are not associated with any constant modification of the arterial blood pressure, or any marked departure in it from the normal. It is the same with other types of mental disorder except congenital states in which the pressure tends to be low. The pressure bears some relation to the bodily tone and increases with advancing age; and as melancholia is generally a disorder of more advanced years than mania it is only associated with higher manometric readings on this account. Sedative drugs have a slight influence in lowering blood-pressure.

From the results of investigations it appears that the complement fixation test can be utilized for the diagnosis of Malta fever, and in view of the occasional unreliability of the agglutination test the complement fixation will be of great advantage as an adjunct in the diagnosis of the disease.—*Medical Times*.

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Therapeutic theatres are reported to be the latest phase of the nature cure in Germany. The theory is that acting and reciting are cures for mental and nervous diseases. An Austrian physician with the not unsuggestive name of Lack professes to have cured many persons by forcing them to act before audiences of their friends in the open air; this on the theory that acting takes the patients out of themselves and thus prevents their thinking of their own maladies. Throughout Austria theatrical organizations to produce plays in the open air are being founded; and during the present summer performances are being given near every large town.—*Medical Times, N. Y.*

In the palm, foreign bodies, by reason of the direction of the thrust, often point toward the dorsum, and in a general way toward the center of the wrist; and such movements as they undergo by muscular contractions carry them further in those directions.—S. S.

—*Ohio State Med. Journal.*

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VOL. XIX.

SEPTEMBER 15, 1913.

NUMBER 9

ORIGINAL ARTICLES.

IN APPRECIATION OF A GREAT TEACHER, DR. ALOYSIUS O. J. KELLY.

It is not the purpose of this sketch to give any data of the ordinary biographical notes. It was the writer's good fortune to see much of Dr. Kelly, to know his plans, to work with him in good comradeship during the last eight years of his life. Believing that a nearer view of this life filled with so varied lines of thought and work would be welcomed by the many who came in contact with Dr. Kelly, and that his depth of soul and wideness of sympathy revealed on close acquaintance were not fully known, this article is prepared.

Dr. Kelly was once criticized as dogmatic. He certainly spoke as one with authority and not as presenting quotations from the scribes. His intense thought, careful research, and discriminating conclusions hit the mark; and many a man has been set right where symptoms mystified and misled by recalling Dr. Kelly's clear cut statements. He was a teacher of individuals; and no matter how large the class, every man was in touch with the lecturer.

During the first years of his work at U. V. M. he was in splendid health and his enthusing spirit at its best. All his powers were in his medical work, backed by a great love of humanity and desire to be of service. It is on those days we love to reflect. One day, the writer, about to leave the college, was accosted by the assistant, who said, "Kelly wants you—you are in for it." The office was in use; and so, in the famous recitation room of the old college, known as "the kitchen," the writer found him. Having taken the lectures in full was the reason of the call. The doctor, sitting on a corner of the table, heard several read; and thus, the third year man came to see Dr. Kelly much and work with him along medical and social service lines.

In those strenuous days, to the casual observer, Dr. Kelly may have seemed to be only concerned in medicine. A "medical missionary," com-

menting after his death, lamented his "lack of spiritual development." The definition of true religion and undefiled given by the "Great Physician" would refute this imputation, for to the needy he was a friend indeed, and he was a faithful follower of his church and its teachings. He was greatly interested in reform legislation and philanthropies. He was a lover of society and found much time for the pet projects of his friends. In Philadelphia, with the University work and that of the Woman's Medical College, three hospital connections, writing, editing, practice, he found time for much charity work. Case after case, especially those of children was carried through. There were many calls to the slums. On one occasion, mistaken for some one else, he was sandbagged. On regaining consciousness, he found himself in a nearby "resort" attended by a fellow professor secured by the thugs, one of whom said, "We wouldn't do nothin' ter harm yer if we knowed it." These two doctors kept their own counsel. "Poor devils," said Kelly, "they like me and its little enough they get from friendship." There was a little hunchbacked girl he looked out for till her death. A one legged newsboy and an old woman crippled by rheumatism, the writer recalls from among many who would be quick to resent a statement as to his lack of religion. We can truly say, "His heart was as wide and true as humanity's need."

And so, he passed on in his days of strength, a great mind and a great heart combating the sorrow and pain of the world with a wonderful optimism and philosophy. A very few knew all the burdens Dr. Kelly carried; those who did saw a heroic uncomplaining endurance. But the splendid strength and courage could not carry everything; and health finally gave way. The change in a few months was shocking. Laboratory tests revealed incurable disease; but he still laughed and urged that nothing be said. "I am going to live a long time yet and do lots of things you know."

A fellow worker assumed his case, but could not stop his working. It was a pathetic thing to see the struggle against odds. The "Practice of Medicine" was not half finished and demanded

much time. When it was in the publishers hands, he wrote, "I feared oft-times, that it would never be; but we may see the other book finished.

The "other book!" It was to be more than other medical works, "nearer the heart," dealing with the humanitarian side of medicine. He

later Dr. Kelly was dead; and the book nearest his heart can never be, yet some of the chapters were finished and what he considered his best literary work.

Many things for the college at Burlington and its graduates were in his mind. In lines of social reform, he was an irreparable loss and



DR. ALOYSIUS O. J. KELLY.

kept ever at it even in the oncoming shadow of death. In a last letter, he wrote, "Have been bothered to see well of late and after a little typewriting my hands get shaky and pen work is jagged. A rest I am sure will set me up and we must then decide on a title, etc. I long to give this message and must hurry." A few days

scores of needy people felt his death most keenly. It seemed almost unreasonable that he should die in his prime. To a few, it seemed that his burdens had taken most of the good things out of his life in spite of his contagious good cheer. However, there is no doubt that he almost welcomed death. He worked right on knowing well

the results. Other diseases were present, and a troublesome deafness was developing. These and other things were getting beyond his optimistic powers. So passed the great teacher, doctor, friend; and his influence and inspiration are our heritage.

It is useless to comment on the loss felt by the profession and close friends. A few quotations of his words will best show the type of mind which was his.

"We work, work, work, and only that we might lift a little of others' burdens we should crave death."

"The little tubercular girl is gone. Sunny, patient, lovable, she helped us all."

"As doctors we should labor to relieve pain especially in the poor, for they suffer so greatly. The rich have ameliorating circumstances, the poor accentuating ones. This old world needs building over."

"I am sure, like tired children, we shall be put to bed to wake in a sunny morning where the hopeless things of evening time will be forgot."

"Medicine is a great calling. It should be more in the minds of its followers than it is. We can never do our best for our patients till we love them; and none are so low but a likable bit is left in their make up."

"Nature has many remedies of her own, probably, none so kind as death. The world is a pleasant place; and we enjoy it; but after all, a feeling of relief comes with the thought we must go from it. Just why should we so jealously fight to keep our sick friends from death and release? We have no answer."

It is rare to find a person capable of so many lines of thought and action. He never seemed hurried. There was always time though the hours counted off work in quantity almost unbelievable. He remembered everything even to detail. No friend ever felt slighted or had reason to feel so. Dr. Kelly's warm heart treasured all his vast acquaintance, and he always sincerely desired to aid each and all. An intimate friend said when weakness came to him, "He does not know how to take our assistance." No selfishness was his; he went forever to give every man his just deserts. It was a never to be forgotten experience to be received by him with his whole souled cordiality. In all his conversation, the writer recalls no instance of Dr. Kelly speaking ill or even slightly of any one. On the contrary, he seemed to love to talk over the

men in the class, the faculty, the people he met and mention some good, salient, point of their personality. His good cheer melted the taciturn to good fellowship.

Some people go through life radiating an influence that uplifts all. It was emphatically true of him. While his life was short in years, it was long in experience and achievement. Many who knew him well can scarcely feel he is gone. The great good will, the strong and striking manner, the optimistic words, the magnetic mind seem ever with us so strongly were we impressed. It was a great privilege and benefit to know him; and while the loss is felt by all most keenly, we know he lived his life to the fullest degree and died uncomplainingly. A longer life in work well done than many of four score years.

W. R. ROWLAND.

MALPRACTICE, AND THE DOCTOR ON THE WITNESS STAND.*

BY

DR. WALDRON B. VANDERPOEL,
New York City.

Malpractice is failure on the part of the physician or surgeon to exercise that degree of care, skill, diligence and judgment that the law requires, and whereby the patient is damaged.

There are two forms, civil and criminal.

Civil malpractice. This is practically negligence. The rulings in different states vary, the general rule is that the law calls for a reasonable skill and experience, and that the same be employed with reasonable care and diligence. That is average skill, and reasonable care. Negligence to use due skill must be proved by the plaintiff. Lack of skill must be shown by the case in hand, not by the general reputation of the physician. The physician is to use his own judgment as to the means of treatment, only if a particular remedy or operation is generally accepted as appropriate and he fails to use it and the patient suffers therefrom he is liable. A cure need not be demanded in order to collect for his services, but if he has contracted for a cure and fails he is liable for breach of contract, or if he has made his fee contingent on a

*Read before the Connecticut River Valley Medical Association, May 13, 1913.

cure and fails he can not collect. A physician may decline a case, but once he has undertaken it he must continue, even though gratuitous, until a reasonable time has elapsed to fill his place, if not gratuitous he has no right to give up the case without reasonable cause until the end of the treatment. Voluntary services do not make one liable for professional skill, and only gross negligence renders one liable, but if services are forced into a case to the exclusion of a competent physician then the party becomes liable for slight negligence or lack of skill. Error of judgment is not actionable if due skill has been used, the reverse also holds, as giving chloroform to patient in an upright posture, or administering any anesthetic without previously examining the patient's physical condition, or by a dentist unless a competent physician is present. A physician must conform to the school he professes and his skill be judged by the tests of that school. An injured limb can be shown to the jury as proof of improper treatment but not after several years. Lack of cooperation on the part of the patient exonerates the physician from liability. The liability of a physician for his negligence continues after the case has passed into the hands of another physician. A physician is not liable for lack of skill or negligence of a physician he leaves in charge of his cases during absence. The burden of proof as to the necessity for the use of instruments to cause abortion is on the defendant. In the case of a dentist or physician it is a good answer in favor of the defendant in action to recover fee for services to show that he has been injured rather than benefited. These rules apply to all persons offering services as a physician or dentist. An action for malpractice does not survive the death of injured party in civil malpractice.

Criminal malpractice. This is summed up in gross carelessness in the use of drugs or operations themselves perfectly lawful, or naturally the doing of unlawful operations or using drugs which are unlawful in certain cases or in unlawful doses.

The physician in the witness chair. He may be called in two ways, (1) to testify to facts which have come under his observation in attendance on the case. (2) as an expert to inform the court and jury as to his opinion of the medical bearing and importance of facts proved or assumed. The attendance in court is secured

by service of a subpoena and tender of the usual per diem and mileage fees. The subpoena must be obeyed even when called as an expert and impromptu answers required to the questions put to him, but the general ruling in the different states is that the physician may make any reasonable contract for expert fees, and in the absence of such contract he may recover a fair and reasonable sum. Failure to comply with a subpoena properly served is punishable for contempt of court. When testifying as to the facts in the case the physician must confine himself to those matters which came under his own knowledge and express no opinions. Cross examination is as a rule to be confined to the matters testified to on direct examination, but where portions of a material transaction have been omitted in the direct examination it is permissible on cross examination to bring those out, also he may be questioned on matters which would tend to weaken his direct testimony, so again he may be asked in regard to his past life as to matters which would cast doubt upon his reliability as a witness, but courts differ as to how far this may be carried. Evidence must be taken as to all facts connected with the case, certain established facts, as flags and seals of state, etc., require no proof, but are accepted. The burden of proof rests on the party having the affirmative issue. In a negative averment as to a condition already accepted, as insanity, etc., the burden rests with the party endeavoring to establish that negative. Relevancy, one fact is said to be relevant to another when the two are so related that one taken by itself, or in connection with other facts, proves or renders probable the past, present or future existence or non-existence of the other fact. The *res gestae* are all the facts relating to a transaction in question. Hearsay evidence is not admissible, the reasons are threefold: (1) the person who made the assertion was not under oath; (2) he is not before the court and jury to prove personally his veracity; (3) there is no chance for cross examination. There are several exceptions.

(1) Confessions made voluntarily.

(2) Declarations by persons since deceased as any public or general right or custom or matter of public interest, if made before the question arose.

(3) Testimony of declarations relating to relationship or pedigree, etc., provided they were made before question arose.

(4) Dying declarations as to the cause of death.

(5) Matters belonging to the *res gestae*.

Privileged communications. These cover several heads as state secrets, judicial matters, deliberations in the jury room, counsel and client, husband and wife, physician and patient. As to physician and patient the former has no right to disclose any facts coming to his knowledge during the treatment of said party except by his consent, and after his death the only party able to give such consent is his legal representative. Facts coming to his knowledge while calling to examine the case for information and not to treat are not privileged or if he calls to collect a bill any observations are not privileged. A physician employed by a third party is not exempt, as a jail physician, hospital physician, or one engaged to attend employees, consultants, and a physician's partner are also under the rule. Information obtained at autopsy is exempt. The law applies also to criminal cases. A district attorney sent a physician to attend a girl on whom criminal abortion had been performed and was not allowed to testify. In my own practice a young girl had been examined some months prior to an accident on a street car in New York City, she had prolapsus uteri, in her case against the railway company the prolapse was attributed to the fall she had sustained. At time of accident she was being treated by a physician living nearby and I had seen her also in consultation. The railroad subpoenaed me. In court attorney for the company asked whether she had the prolapse prior to the accident. I immediately appealed to the court and was sustained. In expert testimony care must be taken not to trespass on the functions of the jury. Best confine answers to hypothetical questions embracing the essential facts of the case, and not give opinions on the facts directly in the case.

The matters touched upon are doubtless known to all and are not presented as anything original on my part, as they could not be, the law is determined by other authorities and all we can do is to accept it, and keep ourselves familiar with it, lest from failure to remember some of the points I have endeavored to bring back to your memory you may be placed at a disadvantage and possibly put to pecuniary loss or injury to your professional standing.

In closing it seems appropriate to say a word on expert testimony. For years the medical

profession has been harshly criticised by the laity for the divergence of opinions expressed by our most able authorities in cases in which they have been called by opposing counsel, until it has become a popular belief that expert opinion can be obtained to sustain either side of a controversy if the pay is sufficient. This we as medical men know to be unjust, yet we must acknowledge that the records of many prominent cases appear against us. Many remedies have been suggested. At present in New York it has been strongly advocated to appoint a staff of medical experts, and let their opinion be final on all medical matters coming up in any case, and no longer pit one expert against another.

THE COMPARATIVE VALUE OF LOCAL ANESTHESIA AND NERVE BLOCKING IN MAJOR AND MINOR SURGERY.*

BY

DR. C. A. PEASE,
Burlington, Vt.

The first and oldest local anesthesia method used was the infiltration method as used by Schleich. The idea of this was to infiltrate each layer of the tissue separately. This necessitated beginning the operation at once and the tissues were more or less distorted and edematous by the infiltration and there was the delay of stopping to infiltrate each area as you came to it. This method is rarely used now in Germany but is used to a considerable extent in the United States. Dr. Bodine of the Polyclinic in New York has done over 2,000 herniotomies by this method combined with cutting down onto and infiltrating the sheath of the iliohypogastric and ilioinguinal nerves. He used a $\frac{1}{5}\%$ solution of cocaine which is about 1-500 and can use from $\frac{1}{4}$ to $\frac{1}{2}$ gr. of cocaine. Strobell 1896.

Quinine and urea hydrochloride were discovered to be local anesthetics in the treatment of malaria in the South. This led to an investigation of its value as a substitute for cocaine. The one per cent sterile solution has been employed in most of the minor and many

*Read before the Connecticut River Valley Medical Association, May 13, 1913.

of the major operations. When a speedy primary union is desired and the duration of the anesthesia beyond a few hours is of no advantage more dilute solution even $\frac{1}{4}$ of 1 per cent may be used for there is less danger of local induration of the tissues. In rectal work it is better to use the stronger solution as the fibrinous exudate they give rise to acts as a hemostatic by external pressure upon the capillaries and the anesthesia is more prolonged. In using the anesthesia a wheal is made just under the skin and this is used as a center from which to infiltrate. From 5 to 30 minutes should elapse from the time of the injection until the operation is begun.

Summarizing the use of quinine and urea hydrochloride:

1. It is soluble in water.
2. It can be sterilized.
3. It is equal to cocaine as an anesthetic power.
4. It is absolutely non-toxic.
5. It has a pronounced hemostatic action.
6. Post-operative anesthesia lasts from four hours to several days (12-14).
7. It is inexpensive and almost always available.

Dr. H. H. Rightos, Helena, Ark., reports a case of gangrene following operation for circumcision.

Novocain is now the drug used for local anesthesia and a $\frac{1}{2}\%$ or 1 oz. solution is used and I use 1% for the superficial injection before infiltrating the deeper tissues. The addition of adrenalin renders the anesthesia more lasting and prevents the rapid absorption by the contraction of the small blood vessels around the area of infiltration. The anesthesia lasts about two hours and as much as 200 c. c. of a $\frac{1}{2}\%$ solution can be used as there are practically no toxic symptoms. The tablets come in vials of 10 tablets each. They are sterile and keep all right if the vial is closed. The solution is made with normal salt solution and when adrenalin is used the solution cannot be boiled.

Tablet A Donitz formula contains 0.125 grams novocain and 0.000125 grams supranenin.

Tablet B, 0.1 novocain, 0.00025 supranenin.

Two of tablet "A" to 1 ounce of normal salt solution makes approximately a 1% solution. There is danger of gangrene if too large an amount of supranenin is used. The infiltration

goes to the finer nerve ends and breaks the conduction of the nerve where it crosses it.

In starting an infiltration make a small wheal in the skin and then infiltrate from this point first superficially and then deeper, injecting the fluid slowly as you withdraw the needle. As a rule you begin 2 finger breadths from the tumor or above and below the point of incision in an abdominal operation. In periosteal tumors infiltrate the skin, then insert the needle deep down under the periosteum to the bone. The bone and brain are practically insensible to pain.

In the abdomen the parietal peritoneum is sensitive. You can burn the liver, intestine or spleen without pain.

Local anesthesia is of special value in operations for inguinal, umbilical and ventral hernia, stomach or fistula (intestinal) and rectal fistula. In other abdominal operations it is not advisable to use it unless some condition of the patient contraindicates a general anesthesia then the local anesthesia can be used using the general if there is any mesenteric drag. I have done 8 appendectomies with local anesthesia. In 6 no general anesthetic was used and in 2 about three ounces of ether, while the mesenteric adhesions were being broken up. In work about the head you endeavor to inject the nerve trunks at their exit.

In operation on fingers, toes or pedus apply a tourniquet and infiltrate the parts using a 1% solution without supranenin as it is liable to cause gangrene. Wait 10 or 15 minutes before beginning the operation.

The infiltration method is of value in benign tumors but in malignant tumors there is liable to be too much granular involvement to make it of value. In goitre this is the anesthesia of choice, being of special value as a guide to the proximity to the recurrent laryngeal nerves. If the tracheal drag causes too much pain a little ether can be used for this part of the operation. In lip operations you infiltrate on each side of the tumor. I have removed two epitheliomas within a short time without any pain to the patient.

On preparing a patient for operation it is well to use some hypnotic as veranol or bromide and chloral the night before the operation and I like to repeat the last two drugs the morning of the operation and give a hypodermic or mor-

phine and atropine one hour before the operation. The patients should be prepared as for a general anesthetic if they are too nervous or the operation more extensive than was expected. Or if it is an abdominal operation and there are too many adhesions you can use a general anesthesia to finish the operation.

The best syringe is a 10 c. c. "Record" with special long needles and one should have two syringes in readiness for use.

If the morphine cannot be given half an hour before the operation it should be omitted entirely for the patient is more excited than quieted for a few minutes after the injection. I have used hyoscine hydrobromate gr. 1/100-1/200 with good results in several cases but do not favor the universal use of the drug.

Care should be used that there is no talking in the operating room and instruments should be passed without making any noise.

Crile holds that physical action and emotional activity are expressions of motor stimulation. That in the human being and lower animals are stored up energy which when released show motion and emotion and that exhaustion is manifest when these are used. The stored energy may be used by excitement, pain or overexertion. It is held that inhalation anesthesia does not prevent injurious impulses from reaching the brain cells and using their vitality causing exhaustion and shock. In inhalation anesthesia the greater part of the brain responds to injury the same as though no anesthesia had been given and the patient suffers from the pull of retractors tugging on pedicles or the mesentary and many of the traumatic occurrences of the ordinary major, of many of the minor operations as is the case in the patient that is in the railway accident and suffers a crushing injury without any anesthetic at all.

All over the body are numerous nerve receptors, some are called "beneceptors" and have to do with the beneficial function while others are called "nociceptors" and protect the body against injuries. These we find in the exposed parts of the body, as the extremities, very much more than in the deeper organs. Physical injury of a sensitive part having "nociceptors" causes nervous exhaustion of the part and this is not overcome by inhalation anesthesia. The state of the patient when all noci associations are excluded is called anoci-association.

This is best accomplished by infiltrating the skin and deeper tissues with 1% novocain solution 10 or 15 minutes before the operation or if this is not practical do it as soon as the patient is ready for the operation. Then, after the skin incision is made inject along the line of incision with 1/2% to 1% solution of quinine and urea hydrochloride, using care that all the stitches are within the anesthetised zone and afferent impulses are blocked and cannot excite the protection mechanism of internal inhibition.

It is found that nerve blocking minimizes and often prevents postoperative and gas pain to a great extent. Crile has had between 2,000 and 3,000 cases of nerve blocking and reduced his mortality to 1.8%. If fear is excluded and the nerve path between the point of operation and the brain blocking by local anesthesia there will be no discharge of energy during the operation.

Under these conditions of operation the nervous system is protected against noci-association. I have employed this method for 2 1/2 months in between 50 and 60 cases and while the number is too small to draw any conclusion yet the results have been very good. One is able to begin the operation before the patient is completely anesthetised and the anesthetic can be stopped while closing up the wound which is often an important factor. I have found that the patients have had very little post-operative pain and in the abdominal cases there have been few gas pains.

Summarizing: I would not advise the local anesthesia for abdominal work if there is no contraindication to a general anesthetic, but for minor surgery and in cases of hernia in old people I think it has a very useful field and one that is not made use of as it should be by the surgeon.

Lundgren reports a number of cases in which he used local anesthesia by cataphoresis sending into the tissues a 10% solution of novocain with adrenalin. The solution is dropped on several thicknesses of filter paper that is cut the size of the electrode and a continuous current applied of 110 volts. Complete anesthesia was induced in 10 minutes with a current of one milliampere and the anesthesia lasted 16 minutes. With two milliamperes anesthesia was produced in 5 minutes and lasted 18 minutes. The paper pad was placed under the positive round electrode covering an area of about 3 sq. c. m., the other electrode was held in the patient's hand.

Vermont Medical Monthly.

A Journal of Review, Reform and Progress in the Medical Sciences.

H. C. TINKHAM, M. D., }
B. H. STONE, M. D., }*Editors.*

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BURLINGTON, VT., SEPTEMBER 15, 1913.

EDITORIAL.

Very much has been said lately about school hygiene and the condition of school houses in Vermont. It is probably true that many school houses in the smaller towns in Vermont are not in a satisfactory condition, they are not properly heated or properly ventilated, and there is no question that this relic of pioneer days should be done away and the school houses of the state be made to meet modern demands in every way. There is no excuse for continuing unsanitary or antiquated school houses and we trust the time is not far distant when every school house in Vermont will not only meet all the modern requirements for health and education but will also be an inspiration to higher ideals by being models of architecture and examples of neatness.

We do not believe, however, that the condition of school houses in Vermont is worse than it is in other states and we deplore the public way in which defects which probably do exist are discussed. It is possible to remedy any evil which

may exist in connection with our school houses without advertising broadcast the few cases of unhygienic conditions as though they represented the common condition of school buildings in Vermont.

We believe fully in correcting existing evils in regard to health but we also believe in defending the good name of the state and promoting her welfare.

The University of Vermont College of Medicine will begin its annual session the last of this month. This is one of a comparatively few of the medical schools of the United States to have a nine months' session. Beginning last year the College of Medicine required a year in college devoted to the study of chemistry, physics, biology and either French or German before beginning the study of medicine.

This increased requirement for preliminary education reduced the size of the entering class last year, in fact, there should not have been any entering class for every one could enter from high school the year before, and the requirement of a year in college would naturally cut out all, or nearly all, candidates for one year. Fortunately, however, a few men had elected to take a year in college before studying medicine, which gave a small entering class. The prospect is very good for a good entering class this year, and with the advantage of a year's additional study the standing of the medical graduates of the University of Vermont must be high. As it is, the graduates of the University of Vermont College of Medicine rank as well as the graduates of Harvard, Yale, Columbia and Johns Hopkins in state board examinations.

The people of the state have every reason to be proud of its State University and of the College of Medicine.

The University of Vermont has established a free dispensary in connection with the College of Medicine. Rooms have been provided by the Mary Fletcher Hospital for the dispensary and have been equipped for this work and the dispensary will be fully organized and in working order when the annual session opens September 24. The work of the dispensary will be thoroughly organized in the various departments of medicine and surgery and physicians will be in attendance to care for patients every day in the week except Sunday.

The College of Medicine has also made definite arrangements with the Mary Fletcher Hospital for the free use of the clinical material which is available in the wards. For the past two years the College of Medicine has been providing over two thousand cases for clinical study each year and the organization of the dispensary and the freer use of clinical material in the wards of the hospital will increase the amount of clinical material very decidedly.

It is very obvious that the results of clinical teaching do not depend so much upon the number of cases shown as it does upon the careful way each case is studied. Doctor Potter of Columbia University, New York, who spent several days in Burlington inspecting the University of Vermont College of Medicine for the Carnegie Foundation for the Advancement of Teaching, said that the University of Vermont College of Medicine has the clinical work organized so that it was making better use of clinical material than any medical school he knew.

The free maternity ward which the University of Vermont has established at the Mary Fletcher Hospital in connection with the College of Medicine is meeting with the success it so fully deserves. The first patient was admitted the day the ward was opened and patients have been

coming in ever since. There are now several cases waiting.

This maternity ward accepts patients who are unable to pay hospital expenses or physician's charges and gives them both.

There is no provision made for the care of babies after the mother is able to leave the hospital, so that arrangements for the care or adoption of children must be made independently of the maternity ward. This free maternity ward is the only one of the kind in Northern New England and as the service is absolutely free to the patient it must be of great service to the poor people of the state. The hospital idea is growing and large numbers of maternity cases are now seeking care in hospitals instead of remaining in their homes, so that the maternity service of the Mary Fletcher Hospital is by no means confined to the free maternity ward.

The University of Vermont through the College of Medicine has done a service of inestimable value to the poor people of the state by establishing this free maternity ward where maternity patients can receive the best professional services and be cared for by trained nurses.

Everything has been provided for the care and comfort of these patients and it is only reasonable to expect that this new department of the Mary Fletcher Hospital will very soon be taxed to its full extent to meet the demands of the people for this free service.

The annual meeting of the Vermont State Medical Society will be held in Burlington on the eighth, ninth and tenth of October. This year is the 100th anniversary of the society and special preparations are being made to celebrate the event at the annual meeting. A very attractive program has been prepared which includes papers and clinics by some of the best medical men in the country. Dr. John B. Deaver of

Philadelphia, Dr. W. G. Thompson of New York, and Dr. John A. Weatherspoon of Nashville, president of the American Medical Association, have already consented to give papers or clinics, or both, and it is expected that other prominent men from away will be present.

There will also be a fine program of social functions which cannot fail to attract the ladies and the way in which the social entertainment is mixed with the literary program will make it easy for everyone to select something that will be enjoyable every hour in the day. Indications are that there will be a large attendance at this meeting. We are printing the program as it is made up to date but which may be somewhat changed before the meeting.

The Centennial of the Vermont State Medical Society will be held at Burlington, October 8th, 9th and 10th.

The program has been arranged for a pleasant social time, as well as scientific discussion. It is still not absolutely settled, but tentatively is as follows:

WEDNESDAY, OCT. 8th

11 A. M. Medical College Building.

Reading of Records, Reports of Officers, Committees, and Delegates to other Societies.

2 P. M. Medical College Building.

President's Annual Address, B. H. Stone, M. D., Burlington.

Address, Guy Potter Benton, LL. D., President University of Vermont.

Vice-President's Address, W. W. Townsend, M. D., Rutland.

Address, John A. Witherspoon, M. D., Nashville, Tenn.

President American Medical Association.

8 P. M. Y. M. C. A. Hall.

Public Address, Walter B. Cannon, M. D., Prof. of Physiology, Harvard Medical College, Boston.

9 P. M. Hotel Vermont Roof Garden.

President's Reception to be followed by an Informal Dance until 12.

THURSDAY, OCT. 9th.

8.30 A. M. Mary Fletcher Hospital.

Paper—Obstruction of the Common Bile Duct—John B. Deaver, M. D., Philadelphia, Prof. Surgery, Univ. of Pa., to be followed by a Surgical Clinic, Prof. Deaver.

2 P. M. Mary Fletcher Hospital.

Paper—Septic Endocarditis—W. Gilman Thompson, M. D., New York City, Prof. Medicine, Cornell Univ., to be followed by a Medical Clinic, Prof. Thompson.

7.30 P. M.

Annual Dinner, Hotel Vermont for which there will be no charge to members and their ladies. Members desiring to sit together may reserve tables seating from 4 to 10 by sending a postal to Dr. C. A. Pease, Chairman of the Local Committee of Arrangements, Anniversary Chairman, Walter L. Havens, M. D., Chester.

FRIDAY.

9 A. M. Medical College Building.

Paper—Henry L. K. Shaw, M. D., Albany, N. Y., Prof. Pediatrics, Albany Medical College.

Paper—Warren S. Bickham, M. D., New York City.

Paper—(Annual Address under Trust Fund)—M. J. Rosenau, M. D., Boston, Mass., Prof. Preventive Medicine, Harvard University.

Paper—Albert Vander Veer, M. D., Albany, N. Y., Prof. Surgery, Albany Medical College.

2 P. M.

Paper—Henry A. Christian, M. D., Boston, Mass., Prof. Medicine, Harvard University.

Paper—John McCrae, M. D., Montreal, Asst. Prof. Pathology, McGill University.

Paper—Harvey W. Cushing, M. D., Boston, Mass., Prof. Surgery, Harvard University.

The customary railroad rates will be given.

The exhibits promise to be large in number and more than usually attractive.

The three hotels, Hotel Vermont, The Van Ness House, and The New Sherwood will provide ample accommodations for all at reasonable rates.

The headquarters will be at Hotel Vermont, where the President's reception will be held, to be followed by an informal dance, on Wednesday evening after the Public Address; and the Annual Dinner will be served there at 7:30, Thursday evening.

There will be buffet luncheons at the Medical College building both Thursday and Friday noons.

Mrs. B. H. Stone is Chairman of the Ladies' Entertainment Committee and promises to all the visiting ladies a pleasant social time, including musical entertainments, luncheons, rides, etc., plans of which will later be announced.

NEWS ITEMS.

Messrs. Rebman, Publishers, 141-145 W. 36th Street, Herald Square Building, New York City, August 28, 1913, take pleasure in informing the profession that the International Medical Congress, held during the first week in August, 1913, has awarded to them the *gold medal* for the *best medical publications*.

NEW YORK AND NEW ENGLAND ASSOCIATION OF RAILWAY SURGEONS.

The twenty-third annual session of the New York and New England Association of Railway

Surgeons will be held at the Hotel Astor, New York City, on Wednesday, October the 22nd, 1913. A very interesting and attractive program has been arranged. Dr. Hugh H. Young, of Baltimore, will deliver the "Address on Surgery." Railway surgeons, attorneys and officials and all members of the medical profession are cordially invited to attend.

DR. JOHN W. LESEUR, President, Batavia, N. Y.

DR. GEORGE CHAFFEE, Corresponding Secretary, 338 47th Street, Brooklyn, N. Y.

Dr. Barnet Joseph of Burlington connected with the pathological department of the University of Vermont, has gone to New York City where he will be connected with the same department of Fordham University.

Dr. Jacob J. Ross has sold his practice in Richmond and will leave soon for Syracuse, N. Y., where he will be secretary and physical director of the Y. M. C. A.

A son, Richard Charles, was born recently to Dr. and Mrs. C. F. Dalton of Burlington.

Dr. E. J. Cray of Brandon was married to Miss Catherine Oram on August 12th.

Dr. Bradford C. Powers, U. V. M. 1912, who has spent a year in Montreal at the Western General Hospital has located in Rutland, Vt.

Dr. C. A. Shaw, formerly of Northfield, Vt., who has recently been engaged in agricultural work has located in Roxbury, Vt.

OFFICE OF INFORMATION, U. S. DEPT OF AGRICULTURE.

Fined \$100 for Shipping Macaroni Color Containing Arsenic.

Washington, D. C.—David and Solomon Katzenstein, doing business under the firm name of Star Extract Works, New York City, have been fined \$50 each for shipping macaroni color adulterated with arsenic, according to a Notice of Judgment issued recently by the U. S. Department of Agriculture.

The adulterated macaroni color was shipped from New York into Missouri. It bore this label:

"Coal — Tar — Yellow Color — Macaroni Shade—Star Extract Works—Importers and Manufacturers of essential oils, Flavoring extracts and supplies, 205 Fulton St., New York."

Adulteration of the product was alleged because it was found to contain arsenic, which arsenic was not a preservative applied externally in preparation of the product for shipment but was added to the product as a poisonous and deleterious ingredient which might render the macaroni color injurious to health.

Dr. J. D. Wheeler, an osteopath with an office at 405 Marlboro Street, Boston, died at his home, 37 Earl Street, Malden, recently. He was 59 years old and was postmaster at Randolph, Vt., during the Cleveland administration.

Twenty-sixth annual convention of American Association of Orificial Surgeons will be held in Chicago, Illinois, September 23-24-25-26th, 1913.

Officers 1913—Honorary president, E. H. Pratt, M. D., Chicago, Illinois; president, B. E. Dawson, M. D., Kansas City, Mo.; secretary-treasurer, W. A. Guild, M. D., Des Moines, Iowa; first vice-president, W. H. Seymour, M. D., Charles City, Iowa; second vice-president, Marie Louise Hunt, M. D., Chicago; Necrologist, H. Michener, M. D., Wichita, Kansas.

Executive Committee—Dr. C. E. Sayre, Chicago, Illinois; Dr. Belle P. Nair, Winnebago, Wisconsin; Dr. W. E. Kinnett, Peoria, Illinois; Dr. V. H. Hallman, Hot Springs, Arkansas.

Board of Censors—Dr. O. W. Okerlin, Essex, Iowa; Dr. Margaret Koch, Minneapolis, Minnesota; Dr. Wm. J. Buck, Gainesville, Florida.

The Supreme Court of Iowa has decided that a safe used by a physician as part of his office furniture in which he kept rare medicine and his surgical instruments is exempt from execution as part of the tools and apparatus of his trade, "the same as office furniture and supplies of a lawyer are exempt."

A shock and fainting spell produced by entering a swimming pool, and resulting in drowning, is held by the Supreme Court of Iowa in

Clark v. Iowa State Travelling Men's Association not to relieve an accident insurance company from liability on its policy for the death on the theory that the death resulted partially or indirectly from "disease or bodily infirmity" within the meaning of an exemption clause in the policy.

Dr. Albert C. Kinney, U. V. M. 1912, son of Dr. F. C. Kinney of Greensboro, has purchased the practice of Dr. J. J. Ross at Richmond, Vt.

The Supreme Court of Pennsylvania has just rendered a decision to the effect that a surgeon is subject to suit for damages where sponges or instruments have been left in the abdominal or other cavities, even though the hospital or nurses have agreed to be responsible in such cases for counting instruments and sponges. It remains therefore for the surgeon himself to count his sponges and instruments.

Dr. William Hayes Mitchell whose home is in Burlington has purchased the real estate and practice of Dr. F. R. Stoddard at Shelburne, Vt.

Dr. J. J. Ross of Richmond, Vt., has sold his practice and accepted the position of physician to the student body of the Syracuse University, N. Y.

Triplets were born Monday, Sept. 3, to Dr. and Mrs. J. B. Woodhull of North Bennington. Today all three babies appear to be in a perfectly healthy condition and the mother is doing well.

The combined weights of the three babies, two girls and a boy, was 18¾ pounds.

Dr. and Mrs. Woodhull have been receiving the congratulations of their many friends. The babies have been placed in a room by themselves where they have been viewed by many of the residents.

Dr. Woodhull, who is a long established physician in North Bennington is 58 years of age. His wife is 31. Their family now consists of six children.

Dr. J. McGinity of Ludlow, Vt., has sold out to Dr. Wendell H. Paige, George Washington University, 1911. Dr. McGinity goes to practice in Springfield, Mass.

Fifteenth annual meeting of the American Proctologic Society, held at Minneapolis, Minn., June 16 and 17, 1913. The president, Dr. Louis J. Hirschman of Detroit, Mich., in the chair.

Officers elected for the ensuing year—President, Joseph M. Mathews, M. D., Louisville, Ky.; vice-president, Jas. A. MacMillan, M. D., Detroit, Mich.; secretary-treasurer, Alfred J. Zobel, M. D., San Francisco, Cal.

Executive Council—Louis J. Hirschman, M. D., Detroit, Mich.; J. Rawson Pennington, M. D., Chicago, Ill.; Wm. M. Beach, M. D., Pittsburg, Pa.; Alfred J. Zobel, M. D., San Francisco, Cal.

The following were elected Associate Fellows of the Society: V. Lee Fitzgerald, 17 Batley St., Providence, R. I.; J. M. Frankenburger, Rialto Bldg., Kansas City, Mo.; Wm. H. Kiger, 308 Consolidated Bank Bldg., Los Angeles, Cal.; Walter I. LeFevre, 218 Lennox Bldg., Cleveland, Ohio.

SCHOOL FOR HEALTH OFFICERS, CONDUCTED BY HARVARD UNIVERSITY AND THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

Beginning this fall Harvard University and the Massachusetts Institute of Technology are to maintain in cooperation a School for Public Health Officers. The facilities of both institutions are to be available to students in the school and the Certificate of Public Health (C. P. H.) is to be signed by both President Lowell and President Maclaurin.

The object of this school is to prepare young men for public health work, especially, to fit them to occupy administrative and executive positions such as health officers or members of boards of health, as well as secretaries, agents, and inspectors of health organizations.

It is recognized that the requirements for public health service are broad and complicated, and that the country needs leaders in every community, fitted to guide and instruct the people on all questions relating to the public health. To this end, the instruction of the new school will be on the broadest lines. It will be given by lectures, laboratory work, and other forms of instruction offered by both institutions, and also by special instructors from national, state, and local health agencies.

The requirements for admission are such that graduates of colleges, or technical and scientific

schools, who have received adequate instruction in Physics, Chemistry, Biology, and French or German, may be admitted to the school. The medical degree is not in any way a prerequisite for admission, although the Administrative Board strongly urges men who intend to specialize in public health work to take the degree of M. D. before they become members of the School for Health Officers.

The Administrative Board which will conduct the new school is composed of Professor William T. Sedgwick, of the Massachusetts Institute of Technology; Professor Milton J. Rosenau, of Harvard; and Professor George C. Whipple, of Harvard. Professor Rosenau of Harvard has the title of director, and the work of the school will be under his immediate supervision.

Dr. Bingham of Williston, who underwent a serious operation at the Mary Fletcher Hospital some weeks ago, is improving and will be able to return to his home before long.

Dr. F. H. O'Connor of Brattleboro, Vermont, assisted by Dr. H. L. Waterman, removed an exceptionally large tumor from a patient in the Brattleboro Hospital recently. An ovarian tumor, weighing sixty-two pounds, was taken from a woman thirty-five years of age whose normal weight is but ninety-two pounds. The woman has recovered.

Delegates to the meeting of the American Life Insurance Association at St. Paul say that women have an intuition of approaching death for which reason they seek life insurance and therefore are undesirable risks.

Dr. Erwin M. Gardinier, U. V. M. '12, whose home is in Amsterdam, N. Y., has located in Bennington, Vt.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

THE QUALIFICATIONS OF THE SURGEON.

In the oration on surgery at the last meeting of the American Medical Association in Minneapolis, W. D. HAGGARD, Nashville, Tenn. (*Journal A. M. A.*, July 19), speaks of the great advances of modern surgery, the responsibility of the surgeon and the needs of the specialty at the pres-

ent time. His criticisms, he says, are intended as purely constructive. He is painfully conscious of his own shortcomings and failure to meet his ideals. He says, however, there is no denying that there is much ill-advised and ill-performed surgery at the present time, and he would that another Senn could arise and rebuke us for our furore to do surgery. It would need a great leader to stem the tide of unnecessary surgical operations of our day. The most dangerous operator is not the enthusiastic beginner, because he will learn; not the antiquated back number, for he will die; it is the occasional operator, the general practitioner without special training other than that received as a medical graduate. The great middle class are the chief sufferers from surgical delinquencies. The poor are safeguarded by their poverty sending them to the charitable dispensaries which are as a rule competently manned, and the rich are protected by their ability to seek and pay for the best. It is the great middle class of moderate means, and those who think one practitioner is as good as another, that are hurt. The multiplication of small hospitals has done good. The size of the town does not matter but the size of the man does. If one man in a community with natural aptitude, innate ability and good training, is put at the head of a well ordered hospital, the character of the work will be high. It is a mistake, however, to encourage several men in a town with a few practitioners to believe he can do all the surgery that comes to him, and it is a mistake for a young man to go out from his one year's hospital work and give out that he is to do surgery exclusively. A foundation for improved conditions must be in more efficient education, and with all the improvements that have been made of late years, the next advance is the compulsory fifth year spent as hospital intern. Every hospital should require the most promising of its internes to continue their service into the second or third year as house surgeons. This gives longer training, is a protection when the house staff changes and is a stimulus to the new internes. Whenever possible the large hospitals should inaugurate the system of having a resident surgeon, choosing the exceptional man, whose tenure should be indeterminate. This increased opportunity for surgical training and the prolonged inspiration of his chief would afford the best facilities and stimulus for a great surgical career. Haggard speaks of the recent foundation in Washington of the College of Surgeons, having for its purpose the elevation and standardization of surgery, which he thinks is of transcendent importance. Every man, he says, before starting the specialty of surgery, should have acted as chief assistant to a master surgeon for at least three years, and better five. Apprenticeship is far more essential in surgery than in other occupations. A man is obliged to act as an apprentice for years before he is licensed to pilot a lumber scow; but who asks for the pilot's license when the surgeon is needed to pilot the frail bark of life through the treacherous waters that separate the "island of Time and the mainland of Eternity"? He concludes with an outline of requirements which he thinks should be enforced, and which appear to be largely the same as those recommended by the new College of Surgeons and embodied in certain proposed legislative enactments.

INFANTILE DIARRHEA.

R. O. CLOCK, New York (*Journal A. M. A.*, July 19), reports the results of the treatment of infantile diarrhea by the intestinal implantation of the *Bacillus lactis bulgaricus*, in a hundred and seventeen cases at the Babies' Hospital, New York, in the summer months of 1912. One hundred and sixteen patients recovered. The case of the one that died is reported. It was a severe case of enterocolitis, of two weeks' duration before treatment. Seventy-two of the one hundred and sixteen cases that recovered returned to the dispensary the following winter with some other affection, and their recovery from the diarrhea was therefore assured. The remaining forty-four patients were looked up by a visiting nurse; three had moved out of the city and could not be followed up, but the remaining forty-one were in good health. The babies varied in age from six weeks to two and a half years, and the average period of time that the disease had lasted before treatment was one week; the shortest two days. The intestinal cases included four cases of enterocolitis and 113 of gastroenteritis, of which forty-seven only were mild and fourteen were toxic. The treatment consisted of the administration of a pure culture of the true *Bacillus lactis bulgaricus*—Type A, the organism of which was imported through the Johns Hopkins Hospital and elaborated in tablet form. One or two tablets were usually given every two or three hours, but in severe cases two or even three tablets were given every two or three hours before and after each feeding, making a total in some cases of forty-two tablets a day. The details of the improvement are given, both as to gain in weight and other symptoms and the most impressive facts standing out in the results of this treatment are summarized by the author as follows: "1. The gain in weight, in spite of the number of stools. 2. The rapid change in color of the stools to yellow. 3. The rapid subsidence of fever. 4. Absence of mucus and blood from the stools at the end of forty-eight hours. 5. The fact that the hygienic surroundings of the patients and the degree of intelligence of the mothers had no influence on the results. 6. A starvation diet, accompanied by purgation, is productive of loss of weight and strength, and serves to prolong the course of the disease; and further, such a procedure can no longer be advanced as a rational method of treating infantile diarrhea. 7. The digestive powers in infantile intestinal conditions, even when associated with fever, are not so impaired as to prevent the digestion and assimilation of a milk diet. This fact is corroborated in typhoid fever where the high caloric diet, in contrast to the starvation diet, has reduced the mortality to a remarkable degree. Moreover, the cases herein recorded prove the value and rationale of continuing a milk diet in infantile intestinal conditions, as illustrated and emphasized in the diagram of weights. 8. In severe cases best results are obtained by administering a large number of the tablets during the first two or three days of the treatment. As many as forty-two bulgara tablets in twenty-four hours have been given to very young babies without untoward effects. 9. The implantation method of treatment has progressed beyond the experimental stage, and the results of its use can be no longer questioned or disputed. This treatment has been proved of practical, clinical and scientific

value; and its simplicity should appeal to every practitioner. 10. In order to secure the best results, in using the implantation treatment, a pure culture of the true *B. lactis bulgaricus* must be employed; otherwise, disappointment will follow. Bacteriologists recognize the fact that the same organism, isolated from different sources, will vary in its virulence and in certain other characteristics; and the *B. lactis bulgaricus* is no exception to this rule. While similar organisms have been isolated from the soured milks of several eastern countries, namely, Russia, Egypt, Armenia, Syria, etc., yet the bacillus isolated from Bulgarian soured milk has been proved to possess the greatest antagonism to putrefactive bacteria. Moreover, in using a culture of this organism for implantation treatment, it is essential that the culture show only viable organisms and that these be present in sufficiently large numbers. Without doubt, it has been the lack of a pure, active culture of this bacillus in viable form that has been the cause of the indifferent results obtained in previous years with lactic acid bacterial therapy."

SKIN DISEASES AMONG INDIANS.

E. S. LAIN, Oklahoma City, Okla. (*Journal A. M. A.*, July 19), gives the summary of his observations and investigations among the full-bloods of the so-called "uncivilized tribes" of western Oklahoma during the past eight years, as opportunity offered. His diagnoses are not, he says, verified by microscope, he having carried them on under difficulties which will obviously suggest themselves to anyone knowing these people. Wassermann tests, etc., are exceptional. His studies corrected an erroneous idea, previously held by him, as to the frequency of syphilis among the Indians. Only among the Arapahoes and a portion of the Cheyennes was it as frequent as among the whites. The most common diseases are: nevus, acne, eczema, lupus vulgaris and erythematosus, pityriasis capitis, seborrhea, among school children; syphilis, verruca, pediculosis, impetigo and other forms of pus infection and, perhaps, most frequent of all, tuberculosis of the lymph-nodes, particularly in the cervical region. The habits of the Indians favor the passing from one to another, and the origination of various diseases. The Indian skin seems to be immune to the poisonous effects of plants like poison ivy, and dietetic skin diseases seem to be less common than might be expected. No baldheaded Indian of either sex was observed and no case of pellagra. Cancer is also very rare. He sums up as follows: "1. The full-blood Indian is not subject to the variety of dermatologic lesions found in the white race. 2. Full-blooded Indians are most free from such skin diseases as may be produced or excited by menstrual disorders or an overtaxed nervous system. 3. Though their food is limited in variety and poor in quality, they do not have many of the skin lesions which we ordinarily attribute to such causes. 4. Previous to civilization, baldness was probably unknown among the American Indians. 5. While syphilis is common among the different tribes, it is not so prevalent as the sensationalists would have us believe. 6. Tuberculosis of the lymph-nodes, particularly of the cervical region, is very preva-

lent and might be largely prevented if more prophylactic measures were enforced by our United States Indian Service. 7. The uncivilized Indian apparently is yet free from pellagra and almost immune to cancer." Lain suggests that the simple outdoor life, limited foods, etc., of the Indian may in some way aid us in obtaining clues as to the etiology and propagation of skin diseases in our own race.

COCCIDIOIDAL GRANULOMA.

J. R. CARSON and W. T. CUMMINS, San Francisco (*Journal A. M. A.*, July 19), report a case of coccidioidal granuloma (California Disease) occurring in a young man, aged 24. Though tuberculin reactions were negative, the symptoms on his first admission to the hospital were suggestive of tuberculosis; the Wassermann was negative. On readmission, six months later, he was apparently suffering from typhoid, which was the clinical diagnosis. The positive Widal reaction obtained was perhaps the result of a typhoid infection in early life. Death occurred in about two weeks after his admission. At necropsy the lesions appeared to be those of miliary tuberculosis, the largest lesions being in the spleen, where, however, they seemed rather firm for tuberculosis. Microscopically, there was no difficulty in demonstrating the *Oidium coccidioides* in the various organs, but most numerous in the spleen.

GANGRENE OF THE FOOT.

J. E. THOMPSON, Galveston, Tex. (*Journal A. M. A.*, July 19), says that while under ordinary circumstances, with healthy arteries, the collateral circulation is sufficient, any assumption on the part of the surgeon of its adequacy is unwarranted, and he should make sure of its state of efficiency. In some regions of the body this test can be made with fair accuracy. "Thus the arm can be rendered bloodless by being wrapped with an Esmarch bandage. If a tourniquet is now fastened on the upper part of the arm below the axilla, the Esmarch bandage can be removed and the limb will still be bloodless. The brachial artery is now compressed against the humerus in such a manner as to obliterate its lumen, but not to stop the collateral circulation, and the tourniquet is removed. If the collateral circulation is competent, blood will be seen to pass slowly from above around the obstruction until it finally reaches the fingertips." The same test can be applied in the thigh, pressure being applied to the femoral artery in Hunter's canal. In most other parts such tests are either impossible or pressure on the main artery will also compress the collaterals. In such a case it is unjustifiable to trust to luck and ligate the artery; it is better to expose the main trunk and compress it by some form of apparatus, of which Matas's aluminum band seems the simplest. If the pressure is not too great no harm is done, and it can be easily removed if symptoms calling for it appear. Not only should we have proof that the collateral channels are competent, but we should know all about their anatomy. To show the need of this he refers to popliteal aneurysms, where the collaterals are close to the swelling and liable to be compressed by it, as well as being liable to injury

in the operation of excision. Hence Matas's operation is most advisable in this case. In ligature of the common iliac artery, great care is needed to avoid injuring the deep epigastric artery, as is also the case in ligature of the external iliac. In operations calling for obliteration or removal of a segment of the axillary artery, the subscapular artery has to be looked after carefully and injury to it avoided. In operations on the intestines the course of the blood vessels must be carefully noted in placing ligatures to avoid injury to the circulation of the intestine. An accurate knowledge of their position and attention to the arrangement of the anastomosing loops will often permit ligature to be placed safely and perhaps admit the removal of tumors without resort to enterectomy. In extensive operations around the rectum and sigmoid the same careful selection of sites for ligatures will greatly contribute to success. Thompson reports three cases of gangrene of the foot, illustrating several points as regards the collateral circulation in spontaneous gangrene of the lower extremity. Two of these are of the senile type, the other was one of Raynaud's disease. He says there are no absolutely accurate methods of ascertaining the exact pathologic state of either the anterior or posterior tibial arteries. At the present time we can only make a shrewd guess, and hence the treatment of actual and impending gangrene of the foot is unsatisfactory. The question of amputation is a difficult one. The plan of waiting is satisfactory provided one is ready to act if the case calls for it. The emperic rule of the old surgeons, he says, is based on correct principles; namely, avoid amputation if possible, but if it is inevitable amputate high in the lower third of the thigh. Here the flaps are generally well nourished through the muscular trunks of the profunda femoris, even if the main femoral trunk is obliterated.

MID-OPERATIVE DIAGNOSIS.

G. KOLISCHER, Chicago (*Journal A. M. A.*, July 19), emphasizes the importance of mid-operative diagnosis, in adjusting the procedure to the existing conditions found. He mentions certain operations in which it is valuable in eurolologic surgery. In external urethrotomy the indications for the mere splitting tissue, or for more or less extensive resection of the fibrous tissue, cannot be decided until the structures are exposed to view and palpation. In operations on the epididymis such as Hagner's epididymotomy or in tuberculous involvement in the organ, the extent of the interference cannot be determined until after surgical exposure. In operations on the prostate, by the suprapubic method the diagnosis between cancer and simple hypertrophy is uncertain until the bladder is opened. The same is true of prostatic hypertrophy and simulating edema. In extensive tumors of the bladder the mid-operative diagnosis is very important and any operation for extensive tumor in this region must be looked on at first as an exploratory laparotomy. In operations on the kidney, the procedure is frequently liable to be modified and sometimes the question between nephrectomy and nephrotomy is never determined until after the exposure of the organ. Kolischer goes into detail on these points and says he does not claim to enumerate all the cases in which

mid-operative diagnosis is most important, but has only attempted to point out some marked examples. He is aware also of the fact that urological operators would give attention to these points, as he says, most of the time in a subconscious way. His object is to induce more concentrated attention to them, and thus to further the acquirement of additional information and also better results.

SKIN DISORDERS OF CHILDHOOD.

The skin disorders of childhood according to ALFRED SCHALEK, Omaha (*Journal A. M. A.*, July 19), are so strikingly different from those of adults as to deserve more consideration than has been given them. In their acute types they are more frequent than those of adults owing to the tenderness and lack of resistance and the greater liability to injurious external agencies of the child's skin. Even among intelligent people, wrong conceptions exist in regard to this matter, and harmful extremes are commonly seen. Many eruptions are directly due to dirt, but too frequent washing removes the natural lubrication and gives the oil-producing glands less chance to do their duty. The matter of soaps is quite important in this connection, only the purest and mildest should be used on children. At times the infantile skin does not tolerate water and soap at all and trying to scrub off scales and crusts leads to a still more severe and apparently incurable condition. The public school is a great factor in the distribution of skin disease, hence the importance of the obligatory inspection of schools, and the examining physician should have more than a smattering knowledge of dermatology. The instability of metabolism and elimination in children are frequently contributing factors. Whether we believe skin eruptions to be local or not, the regulation of the gastrointestinal functions is most important in treatment. No general rules can be given, for individual treatment is required. The feeding may be insufficient, excessive or irregular, the condition of the mother's milk must be examined, a frequently neglected point in breast feeding, and the diet of the older children also needs careful supervision, especially when there is disease of the skin. The disturbances of the nervous system have more to do with causing skin disease than is generally appreciated. Rest and sleep are essential in acute conditions, and patients frequently recover under the same treatment in a hospital that had failed at home because of the handling and petting they endured. The classification and nomenclature of children's diseases, like that of adults, is unsatisfactory, and besides the etiology certain other factors should be considered. Many skin affections of childhood appear at certain periods, either exclusively or by preference, and no satisfactory explanation has been given. The same diseases may appear in very different form in children from that of adults, on account of the higher vascular irritability and lesser vitality of the skin. One who has not especially studied them may be puzzled in diagnosis. The rule observed in adults, to depend for the diagnosis on some characteristic primary lesion, does not always hold good with children. Any causative or aggravating complication must be attended to. This is the one general rule. It is better to do too little in the way of internal medication than too much. The few drugs that

seem to have direct action on the skin in adults, such as arsenic, iodids, etc., must be used with great caution in children and antipyretics and opiates should be avoided as much as possible. An occasional purge with calomel, some iron tonic and possibly a diuretic is usually all that is needed. Another general rule is to be conservative rather than aggressive in the management of the local treatment. The natural tendency of the skin is to get well, and its protection is of the utmost importance. This means avoidance of irritation of every kind, a due amount of restriction of any strong local stimulation and the number of applications. The efficiency of treatment is not so much dependent on the knowledge of many remedies, as on skill to recognize indications, and the proper method of meeting them.

ARTERIAL OCCLUSION.

G. W. ROBINSON, Kansas City, Mo. (*Journal A. M. A.*, July 19), reviews the literature and speaks of the rarity of the occlusion of the posterior-inferior cerebellar artery, and publishes a carefully reported case. He describes the anatomic structures and the symptomatology, which in his patient showed some differences from that formulated by Spiller. The important symptoms are: 1. Sudden onset without disturbance of consciousness. 2. Lack of involvement of the innervation of the fifth nerve. 3. Diminution of the epicritic pain and thermal sense over the side of the face corresponding to the lesion, and an algesia and complete loss of thermal sense over the contralateral half of the body below the lesion. Peresthesias in area of disturbed objective sensation. 4. Tactile sensation intact, diminution of sensation of roughness over the ipsilateral side of the face. 5. Diminished recognition of posture and passive movement in contralateral arm and leg. 6. Spatial discrimination perfect. Incoordination of limbs corresponding to side of lesion. 7. Slight cerebellar ataxia with tendency to fall toward side of lesion, not increased with eyes closed. 8. Bilateral nystagmus, more intense when eyes are directed toward side of lesion. 9. "Meniere's symptom-complex; vertigo, revolving vertigo, auditory hallucinations, vomiting, deafness on side of lesion. 10. Paralysis of muscles of deglutition, soft palate and larynx on side of lesion causing much difficulty of deglutition with loss of phonation. 11. Sympathetic disturbance on side of lesion, causing smallness of pupil, narrowing of the palpebral fissure, retraction of eyeball and loss of sweating in the face on same side. The reflexes were plus but no special significance."

POTASSIUM PERMANGANATE.

In a preliminary communication (*Journal A. M. A.*, July 19), W. M. BARTON, Washington, D. C., reports his discovery of the anesthetic effects of potassium permanganate on the genito-urinary mucosa. He has observed that in irrigating subacute and gonorrheal urethritis that the primary sensitiveness following injection soon disappeared after the use of permanganate irrigation, and he therefore tried this treatment to reduce the sensitiveness prior to the passage of sounds in a case of stricture. This ex-

periment showed that anesthesia of the mucous membrane of the urethra could be completely and satisfactorily produced by dilutions of potassium permanganate, 1 to 2,500, or 1 to 5,000, but failed with higher dilutions. Experiments made on the external skin showed the substance entirely ineffective to produce desensitization, probably on the impossibility of its penetrating to the nerve endings. Such a method of producing satisfactory anesthesia of the mucous membrane of the urethra and bladder, without possibility of toxic results and simple in its application, should, he thinks, be welcome by those who are obliged to perform painful manipulations on these organs. He has seen no mention of the method in medical literature or heard of its use from his colleagues, many of them genito-urinary specialists.

LEAD POISONING.

A. J. CARLSON and A. WOELFEL, Chicago (*Journal A. M. A.*, July 19), publish the results of an investigation of the solubility of lead salts in the human gastric juice, with special reference to the hygiene of the lead industries. Of the three avenues of lead absorption, the skin, the lungs and the digestive tract, the latter seems to have been the least investigated. The authors used samples of paint dust of basic lead carbonate and basic lead sulphate, supplied them by the chief chemist of the Pullman Company and the Pilcher Lead Company of Joplin, Mo. Normal human gastric juice was obtained from a man 27 years old with complete constriction of the esophagus and a gastric fistula of 16 years' standing. It was secreted while the man was chewing palatable food and hence was normal "appetite" or "psychic" juice, not mixed with saliva. The total acidity varied from 0.40 to 0.52 percent. The relative solubility results of lead carbonate and lead sulphate in gastric juice are shown in tabulated form. The action of bile on the lead salts was also investigated, and the relative toxicity of the two salts when fed to dogs and cats was studied and the experiments reported. The influence of milk when taken in the stomach in affecting the solubility was also observed. Besides the summary which is given, showing the solubility of the two lead salts under various conditions, the authors offer the following practical suggestions indicated by their results: "1. The lead carbonate is so much more toxic than the lead sulphate that lead workers, as well as the state, should aim at the elimination of the use of the carbonate in all industries in which this is possible. 2. In addition to taking other important prophylactic measures, the lead workers should drink a glass of milk between meals (say 10 a. m. and 4 p. m.), in order to diminish the chances for any swallowed lead to be dissolved by the free hydrochloric acid of the gastric juice, as in some persons there is considerable secretion of gastric juice in the empty stomach."

THE PHENOLSULPHONEPHTHALEIN TEST.

C. GOODMAN, New York (*Journal A. M. A.*, July 19), after referring to a former article by Dr. Kristeller and himself in which they advocated the use of the phenolsulphonephtalein test as devised by Rowntree and Geraghty, says that further experience

has led him to believe it the best of all tests estimating the functional activity of the kidneys in health and disease. It consists substantially in injecting 1 cc. of solution, containing 0.006 mg. of the dye, intramuscularly after previous sterilization by boiling. The urine is collected in a vessel containing a few drops of sodium carbonate or sodium hydroxid solution. The patient is encouraged to void his urine every few minutes so that the time of the first appearance of the drug may be noted. This is easily shown by the beautiful pink color which the urine assumes in contact with the alkali. The urine is then collected at the end of the first and second hours, respectively. If the patient is unable to void the urine a catheter may be used but fairly accurate results can be obtained by collecting the urine in one hour and ten minutes for the first specimen. If the functional activity of one kidney is sought the ureteral catheter or segregator will have to be used. Eight ounces of water should be given the patient about twenty minutes before the injection to insure free diuresis. The dye lends itself readily to calorimetric estimation by the Duboscq, Heilig or Dunning apparatus, and directions are given for their use. Goodman gives tabulated results of the use of the test in various diseases, and offers the following as the principal points deduced from his observations: "1. In clinical influenza the small output of phenolsulphonophthalein is out of line with the findings in other general diseases, and a search for the reasons of this offers an opportunity for an interesting study, which I hope to pursue in the near future. 2. The general series of diseases shows a good output of phenolsulphonophthalein as a rule when there is clinically no evidence of kidney involvement. 3. The findings in regard to the value of this test, both from a diagnostic and prognostic standpoint, in nephritis confirms former conclusions in this respect, and also the statement of Rowntree and Geraghty, that it reveals the degree of functional derangement, whether the nephritis be acute or chronic. 4. In several of my cases this test has revealed a degree of renal insufficiency, of which the clinical condition of the patient gave no evidence, but the existence of which has been confirmed by the fatal outcome of the case. 5. The test has served to demonstrate renal insufficiency in instances in which operation was contemplated and in which, though chemical and microscopic examinations were negative, subsequent developments confirmed the existence of the renal insufficiency. 6. In cases of ureteral or renal obstruction, my findings are again in line with those of Rowntree and Geraghty in that I found a marked improvement, as indicated by the phenolsulphonophthalein test, following the removal of the obstruction. 7. In unilateral and bilateral disease of the kidney, the test has revealed the functional capacity of each kidney, and to such satisfactory degree that, in some instances, it has assisted me to determine on the course of operative procedure. An absence of a very small output of the dye from one kidney with an increased output from the other side, indicates a seriously diseased kidney on the one side, with a compensatory hypertrophy of the other kidney."

RESTRICTED MATERIA MEDICA.

M. I. WILBERT, Washington, D. C. (*Journal A. M. A.*, July 19), considers the present defective condi-

tions existing in pharmacists and points out the needs and possibilities, which he sums up somewhat as follows: "The present-day drug store with its numerous accommodations for the public, has developed into a neighborhood necessity that can be continued with or without the strictly drug feature of the establishment. In connection with a general collection of 'side lines' it is impracticable for even the most careful and expert pharmacist to exercise any degree of supervision over the many drugs and preparations that must now be carried in stock. In a shop devoid of 'side lines' that is equipped with the necessary analytical apparatus, it would be possible to exercise efficient control over a reasonable number of well-defined medicaments, and the physicians of the country, if they will but take an active interest in evolving a restricted or preferred materia medica list, can contribute much toward developing the science relating to pharmacy to such an extent that it may be a potent factor in the progress of the healing art, and thus in turn a factor in promoting the welfare of the public at large."

LUMINAL.

F. J. FARNELL, Providence, R. I. (*Journal A. M. A.*, July 19), publishes an account of two cases showing toxic effects of the new hypnotic, luminal (phenylethyl-barbituric acid). In one, a young woman, aged 24, was given 0.3 gm. of luminal, not to be repeated for forty-eight hours, which was ineffective in producing sleep as desired. She therefore took a second dose the next evening, twenty-four hours after the first, and slept very decidedly all night and until 10 the next morning. When awakening she showed symptoms of scanning speech, paraphasia, ataxia and astasia and a general somnolent tendency, all lasting about twelve hours. Her pupils were dilated and knee-jerks diminished. There were no disturbances of sensation. In the second case a man was given 0.6 gm. and told to repeat in one hour with 0.3 gm. Three hours later he was still awake and was given 0.2 gm. of veronal. He went to sleep about 4 a. m. and had to be awakened at 10 o'clock. He then showed the same symptoms as in the first case, if anything more marked, and also gastrointestinal disturbances. This condition lasted for forty-eight hours, with long periods of sleep, when he gradually returned to normal. In an additional note attention is called to the large doses given as reported. In the first case equalling the maximum recommended and in the second exceeding it. The cases illustrate the need of caution in the use of new remedies.

ANGINAL PAINS.

C. L. GREENE, St. Paul, Minn. (*Journal A. M. A.*, July 19), says that cardiac pains of the most severe type, closely mimicking true angina pectoris, may occur in various conditions, and quotes Head and McKenzie to this effect. As a result of his studies, he believes that the chief factor in all cardiac pain, unassociated with pericarditis or aneurysmal pressure, intense or mild, transitory or persistent, is to be found in the strain imposed on a weakening and laboring heart, often combined with a degree of individual hypersensibility and heightened reflexes.

The treatment will be greatly simplified if we consider it as representing impaired tonicity and contractility induced by cardiac fatigue. In the treatment he specially warns against the routine methods of certain sanatoria, followed without consultation with the attending physician. His summary of his paper is as follows: "1. While recognizing its wide variability, we should assume the unity of pain of cardiac origin and found our therapy on the one chief causative factor—cardiac exhaustion. 2. The wide distribution of cardiac pain in the superficial sensory areas has led to misinterpretation of the lesser degrees of pain of the same origin, and hence too much neglect and diagnostic error. 3. The efficient treatment of cardiac pain in the broader sense resolves itself into the management of an insufficient, overfatigued heart muscle. 4. Mental and physical rest and regulated exercise afford the best means of restoring a proper circulatory balance. 5. A proper valuation of the subjective symptoms of cardiac overstrain, early oversight and the timely and judicious treatment of cardiac lesions is quite as important as is the early recognition and treatment of tuberculosis."

DISEMBOWELED INFANT.

E. N. REED, Clifton, Ariz. (*Journal A. M. A.*, July 19), reports a case of a baby born with the intestines outside the abdomen, the umbilical opening admitting two fingers. Two hours after birth the intestines, which were matted together with fibrinous adhesions, were cleansed as far as possible and replaced. The birth conditions were very unfavorable; there was much adherent debris, the cleansing was necessarily gentle with salt solution and sponges, and of course not very thorough. The appendix, three-quarters of an inch long, seemed contused and swollen. Catgut ligature was thrown around its base and it was removed. The umbilical opening enlarged for half an inch upward and downward and its cord bearing edges trimmed off, was hurriedly closed with one layer of buried catgut and one of silkworm gut. The child made an uneventful recovery, save for one stitch abscess, and is now healthy, growing and well.

RADIUM IN SKIN DISEASES.

FRANK E. SIMPSON, Chicago (*Journal A. M. A.*, July 12), presents a preliminary note with reference to the action of radium in skin diseases based on studies made on forty-five patients with fifteen different skin affections who have had in the aggregate about one thousand applications of radium. He briefly discusses the physics of radium, the method of application, and the kinds of reaction produced in the tissues. He emphasizes the importance of the personal factor and a study of the exact character of the lesion. He reports his results in epithelioma as follows: "Although the use of radium has been extended gradually from small benign growths to large malignant tumors, the cases should be selected with the greatest care in order not to deprive patients of other treatment that may at times be more effective." Of angioma he says: "The absence of pain and the beauty of the cosmetic result are

noteworthy. The possible late development of telangiectases may slightly mar the final result, but these fortunately can be removed and to some extent precluded by avoiding too strong doses. He reports results also in nevus pigmentosus, tuberculosis, tuberculosus verrucosa cutis, syphilis, blastomycosis, syccosis vulgaris, keloid, hypertrichosis, dysidrosis, neurodermatitis, trichophytosis of the finger-nails, lichen planus, psoriasis and lupus erythematosus. With regard to lupus erythematosus he says: "At the present time an exposure of about thirty or forty minutes is being given, followed in a few days by two shorter exposures of from ten to fifteen minutes each. Patches covered by thick crusts or scales demand longer treatment than the more erythematous patches. While the capricious character of lupus erythematosus makes it difficult to estimate the effect of any treatment, radium is undoubtedly a great addition to our resources in this intractable affection."

TREPONEMA PALLIDUM.

HIDEYO NOGUCHI, New York (*Journal A. M. A.*, July 12), discusses the transmission of *Treponema pallidum* from the brains of paretics to the rabbit. He says: "The findings already at hand indicate unmistakably that *Treponema pallidum* plays an important part in the pathogenesis of general paralysis and possibly in tabes also. Since the demonstration of this microorganism in sections, however, merely indicates its presence in relation to the pathologic lesions of these diseases, it becomes of great importance to ascertain from living examples something of the biologic properties of this organism, which remains so persistently within the central nervous organs in these two pathologic conditions." He reports the results obtained by injecting six rabbits with emulsions prepared from fresh brains from paretic individuals and says that "the results indicate that typical syphilitic scleroses containing *Treponema pallida* have been produced in the tests of two rabbits by the inoculation of an emulsion of the brain obtained from a paretic individual." A full report on this subject is to appear in a forthcoming number of the *Journal of Experimental Medicine*.

MULTIPLE URETHRAL CALCULI.

WILLIAM E. STEVENS, San Francisco (*Journal A. M. A.*, July 12), reports an unusual case of calculi of the urethra which seems worthy of publication on account of its etiology, the large number of stones formed, primarily in the urethra, their wide distribution and the rather peculiar course. He says that he has been unable to find another case in the literature in which the calculi have been found simultaneously in the navicular, pendulous, scrotal, bulbous, membranous and prostatic portions of the canal. He discusses location, etiology, symptoms, diagnosis and prognosis in this condition. With regard to prognosis, he says: "The prognosis is favorable as regards life but not so favorable as regards recurrence, as it is not always possible to remove the cause. He states that local treatment by remedies having the properties of dissolving stones does not deserve serious consideration. Better results are

obtained with external urethrotomy. This is useful, however, only in the case of single stones.

NITROGEN AND AMMONIA NITROGEN IN URINE.

JACOB ROSENBLOOM, Pittsburgh, Pa. (*Journal A. M. A.*, July 12), discusses clinical methods for estimation of total nitrogen and ammonia nitrogen in urine. He says that the methods he describes are sufficiently accurate for clinical needs and may be carried out in the most modest laboratory.

PEMPHIGUS FOLIACEUS.

J. B. KESSLER, Iowa City, Iowa (*Journal A. M. A.*, July 12), reports two cases of pemphigus foliaceus. After describing the appearance of the skin in this disease and discussing briefly its etiology, diagnosis and prognosis, the author concludes by saying: "The internal and local treatment in these cases seems to be highly efficacious. Two patients within one year with pemphigus foliaceus in an agricultural district is unusual. Quinin in large doses seems to be highly beneficial in keeping the disease in abeyance. Linseed meal and baths containing compound solution of cresol remove the odor and keep the skin pliable and the patient comfortable."

INOCULATION OF RABBIT WITH PARETIC BRAIN SUBSTANCE.

HENRY J. NICHOLS and WILLIAM H. HOUGH, Washington, D. C. (*Journal A. M. A.*, July 12), present a preliminary report of their experiments in the inoculation of rabbits with spinal fluid and brain substance from paretics. They conclude as follows: Our result tends to confirm Noguchi's demonstration in so far as it relates to a living virus present in the brain substance. Our failure so far to find the spiral form of the organism may suggest the presence of some other form, such as granules, which are not recognized, but for the present we prefer the view that spirochetes are present, as such, but in too small numbers, as yet, to be readily found.

NITROGLYCERIN.

EDWARD E. CORNWALL, Brooklyn (*Journal A. M. A.*, July 12), discusses when and how to use nitroglycerin. He emphasizes the following points: 1. The general indications for the use of nitroglycerin are (1) to relieve symptoms of localized arteriosclerosis or arterial spasm in vitally important regions of the body, and, when there is pain due to contracted or diseased arteries, in other regions; (2) to reduce general high blood-pressure in selected cases, if its continuance threatens accidents to the cardiovascular apparatus; and (3) to clear the diagnosis. 2. The chief contra-indications to the use of nitroglycerin are (1) low or relatively low blood-pressure; (2)

advanced chronic nephritis with very high blood-pressure and toxemic conditions producing high blood-pressure, as a rule; and (3) the presence of an idiosyncrasy in regard to its action. 3. Nitroglycerin should never be used for the primary purpose of a heart stimulant. 4. Nitroglycerin given under the tongue produces almost as prompt an effect as when injected under the skin. 5. Nitroglycerin, if given too long or in too large doses, can produce injurious effects, which, however, usually pass away, at least apparently, when it is discontinued.

DIPLOSA.

JOHN MACLACHLAN, Cleveland (*Journal A. M. A.*, July 12), makes a tabulated comparison of the effects of diplosal, sodium salicylate and oil of gaultheria. In conclusion he says that one must admit that diplosal is, like all the salicylates, toxic, if given in large doses; and that it does require much smaller doses to produce the toxic effect.

THROMBOPHLEBITIS.

M. LEALE, New York (*Journal A. M. A.*, May 17), remarks that little seems to have been written on this pathologic condition when it invades an intra-abdominal vein. He therefore takes up the subject of the symptomatology and diagnosis of thrombophlebitis of the external iliac vein, and reports a case complicating typhoid fever. The anatomic explanation of the greater frequency of the condition of the vein of the left leg is first referred to. Thrombophlebitis of any vein is usually the result of bacteriemia or toxemia from surgical infections or infectious disease but it may occur from any cause increasing the coagulability of the blood. In most cases a constriction of the vessel wall is needed but anything lowering the vitality of the blood-vessels or markedly retarding the velocity of the blood-stream in the vein tends to favor it. The symptomatology may be very clear or may be very obscure and in examining for lesions in the external iliac veins the anatomic conditions must be kept in mind. The further above Poupart's ligament it occurs, the greater the difficulty. When it is merely an extension of the process in the femoral the case is different but when it begins within the abdomen an early diagnosis is very important and difficult. The early symptoms are a dull ache or more or less sharp localized pain and a sudden rise in the pulse rate which is usually small, followed later by fever, and it may be twenty-four hours after the first symptoms before anything can be found by palpation. In a day or two there is likely to be edema of the leg or near the site of the thrombus, but this may be a late symptom. The edema of cardiac or renal disease shows more pitting on pressure. The occurrence of distension or regional or general tympanites should be noted. In other acute abdominal conditions the pain is frequently not so localized, and there is a marked fall in the blood-pressure in acute abdominal conditions and a steady aggravation of the symptoms. The rigidity of overlying muscles is not so marked in iliac thrombosis. The brief rapidity of the pulse is a hopeful symptom but it does not usually last very long. Blood examinations

in the early stages of thrombosis do not show so marked leukocytosis or rise in polynuclears as in the acute stages of most infections. Careful examinations of the blood may afford valuable evidence. In considering the prognosis we must bear in mind that the thrombus may not completely occlude the vein at the start but may do so later, and then the prognosis will depend on how rapidly the collateral circulation is formed or whether or not the thrombus is absorbed. The possibility of an embolus is also to be considered. The condition of the patient is important. The better the circulation of the blood and the condition of heart and blood-vessels, the more rapid the disappearance of the symptoms. In the case reported the complication occurred in an otherwise uneventful convalescence from typhoid fever.

SKIN-GRAFTING.

J. WIENER, New York (*Journal A. M. A.*, May 17), gives an account of his first case in which he tried skin-grafting without dressings and which has led him to adopt this plan since that time—a period of six years. The conditions were unfavorable and yet the results were such that he has used this method of open grafting even in desperate cases and almost always with success. He has found it inadvisable to apply a wet dressing, even a bland one, until at least two weeks have elapsed. "The grafts are cut as thin as possible and applied in the usual manner. Suppurating sinuses in the grafted area are packed with iodoform gauze. These packings are changed, as often as they become saturated with the discharge, without disturbing any of the grafts. The grafts can be placed within a half inch of a discharging sinus and they will take. During the first day or two crusts of inspissated serum form between the different grafts; these crusts should not be disturbed. For seven or eight days, or even longer, no dressing of any kind is applied. Usually after the first day or two, the grafts have already become firmly adherent and have a healthy pink color. After seven or eight days a weak ichthyol ointment is applied over the entire grafted area. Under this dressing the crusts that have formed between the grafts drop off, and in a short time the area assumes a normal appearance." He feels justified in recommending the method and thinks that, if the details are properly carried out, the most skeptical will become convinced of its value.

PLAGUE IN PORTO RICO.

R. H. CREEL, San Juan, Porto Rico (*Journal A. M. A.*, May 17), describes the methods for eradicating plague in Porto Rico. He first mentions the persistence of the infection among rodents when plague attacks any region and the need of public cooperation in the measures for its eradication. Failing this recrudescences will certainly occur when the community becomes indifferent. The last vestige of infection in San Juan was apparently destroyed on September 11, last, and the existence of the infection in the Island, during which there were 55 human cases with 36 deaths, covered as far as the human species is concerned a period of only 35 days. Infected rats have still been found on the

island in small numbers. The measures used against the plague were patterned after those in San Francisco and embraced the quickest possible rat-proofing methods, wide-spread trapping and poisoning, inspection of inland-bound freight to prevent the transportation of rodents, the tagging of all infected so that their location could be known, and sulphur fumigation of all infected premises. The details of rat-proofing are given at length. Disinfection was not utilized, since all the cases were of the bubonic type. Pulecidal measures (sulphur fumigation and petroleum or petroleum emulsion) were made use of. General unsanitary conditions did not seem to be a factor as regards the incidence of human cases. The laboratory methods and their results are noted. The flea-infestation is very low in Porto Rico as compared with other tropical countries. The presumptive evidence also points to a spread of the infection by infected rats in merchandise and the need of keeping the water front as rat-proof as possible is especially emphasized. Maritime quarantine alone is not sufficient. The introduction of rats as undetected stowaways cannot be prevented absolutely in ports with extensive trade.

RESECTION OF THE ESOPHAGUS.

In a preliminary report, F. TOREK, New York (*Journal A. M. A.*, May 17), reports a case of resection of the middle portion of the esophagus for malignant disease, the first, he claims, on record. It is in this portion of the esophagus that carcinomas are most common, those of the lower being less frequent and those of the upper third rare. The inaccessibility of cancer in this situation has excluded these cases from operative interference heretofore, but they are the ones that should be operated on since they are less frequently associated with metastases. The patient had been previously operated on for gastrostomy and it was necessary to perform very careful dissection of the vagi, and another problem was to prevent leakage from the proximal stump after resection. The more important features of the operation are detailed by the author as follows: "Instead of seeking access by going through two different intercostal spaces and dissecting off the scapula or by resecting several adjacent ribs, procedures recommended by others, I incised through the whole length of the seventh intercostal space, from the posterior end of which I extended the incision upward by cutting through the angles of the seventh, sixth, fifth and fourth ribs, which gave a much better exposure and is far simpler. The greater ease of access enabled me to dissect the pneumogastric nerves more carefully, and to my great satisfaction, the pulse never wavered during this procedure, remaining between 93 and 96. The dreaded vagus collapse had therefore been safely avoided. The great difficulty of dissecting that part of the esophagus which passes behind the arch of the aorta was overcome by ligating a number of thoracic branches of the aorta and lifting it forward. Last, but perhaps most important, to avoid the danger of leakage from the upper stump of the esophagus, I eliminated the esophagus from the pleural cavity altogether. This was done by dissecting the organ loose from its attachments all the way up to the neck and bringing it out through an incision at the anterior border of the left sternocleidomastoid muscle. Thus the pleural cavity could

not possibly become infected from that source. The thorax was closed without drainage." Recovery followed. He feels sure that this operation will gain friends and the fuller details will be published presently. The matter of greatest importance in these cases is to consider that early diagnosis and operation afford the greatest safety.

NON-PERIOSTEAL BONE-GRAFT.

H. G. WETHERILL, Denver (*Journal A. M. A.*, May 17), reports the latter results in his second case of transplanting bone-grafts without periosteum, reported in *The Journal*, March 29, 1913. A photograph is given showing the boy standing on the grafted leg with the other foot raised from the floor. He walks without crutches and the shaft of the bone at the grafted point feels and appears larger than that of the opposite leg. An x-ray picture is also given.

FRACTURE OF THE CARPAL SCAPHOID.

P. G. SKILLERN, Philadelphia (*Journal A. M. A.*, May 17), describes two cases of fracture of the carpal scaphoid which might readily have been diagnosed and treated as sprain or contusion and consequently neglected. In both instances the diagnosis was made without the x-ray. The frequency of this fracture is, he thinks, greater than is generally supposed and it is the cause of many cases of otherwise unaccountable crippled wrists. Isolated fractures of the scaphoid are not to be treated by massage and passive motion. This bone does not heal readily and the proper treatment in early cases is immobilization for four weeks. If after this time there is still non-union, the fragment, ordinarily the proximal, is to be ablated through a half-inch incision through the extensor digitorum communis and extensor carpi radialis brevis tendons. Functional result is generally perfect. The article is illustrated.

BACTERIAL VACCINE THERAPY.

The discussion of bacterial vaccine therapy is continued in *The Journal*, May 17, with reference to classification. Vaccines may be classified as autogenous and stock vaccines and these may be still further subdivided. Autogenous vaccines are derived from bacteria taken from the patient himself and are usually simple, derived from a single causative organism of his disease. In some cases, however, differentiated mixed vaccines are employed as in cases of mixed infection as shown by bacterial examination. The species are isolated in pure cultures and converted into vaccines and these are combined in proper dosage for each species at the time of inoculation. An undifferentiated vaccine has been employed without isolating, but this is a crude method deserving condemnation. The vaccine made in bulk and subdivided to obtain proper dosage is called a stock vaccine. Such are all commercial vaccines. Stock vaccines may be single, containing

only one variety, or mixed containing two or more of the same species. To these last the term "poly-valent" has been applied. This is offered as a substitute to save trouble and they offer a sort of a shotgun method which is here condemned as complicating vaccine therapy and encouraging a false sense of security on the part of the physicians using them. Mixed mixtures of stock vaccines are possibly permissible under certain circumstances, as when a preliminary bacteriologic diagnosis has been made by which the identity of the mixed infection has been ascertained, and the mixture of the corresponding bacteria is performed at the time of inoculation. This, however, requires some qualification which will be explained later. Objectionable mixed stock vaccines include practically all the mixed stock vaccines on the market and for the most part are designed to be used by the unscientific processes of guesswork. Theoretically autogenous vaccines are the agent par excellence of vaccine therapy. By their use antibodies of precise specificity are aroused, giving exactly that class of immunizing substances required, and practice has confirmed this. Of course they may fail, but they are therapeutically successful and should be more generally adopted for the following reasons: "1. Any result that is possible in therapeutic immunization can be secured by autogenous bacterial vaccines. 2. Therapeutic results otherwise unattainable may follow the proper use of autogenous vaccines. 3. Autogenous vaccine therapy makes prerequisite a bacteriological diagnosis, the only real scientific method of approaching the treatment of an infection. 4. If carried out in detail by the practitioner, it assures the possession of a certain skill and experience without which vaccine therapy is merely an empiric procedure. 5. It assures a personal, intimate touch between the practitioner and the patient. 6. It assures the independence of the practitioner from commercial vaccine interests. 7. It elevates vaccine therapy to its proper level of a special practice in the hands of thoroughly qualified physicians." The objections that have been raised to autogenous vaccines are the loss of time involved and the difficulty of obtaining pure culture of the germs in some cases. The first objection is less serious in itself, but the latter has some weight and one may be compelled to resort to stock vaccines while the effort is being made to secure the autogenous one. In some cases it becomes a question of stock vaccines or none at all, as in some gonorrheal rheumatism cases in which the germ is inaccessible. In case of the tubercle bacillus practically all workers resort to the stock vaccine.

CHIEF OF BUREAU OF CHEMISTRY DISCUSSES RURAL SANITATION.

Dr. Carl L. Alsberg, chief of Bureau of Chemistry, U. S. Department of Agriculture, yesterday (September 9th) delivered an address before the general session of the 41st annual meeting of the American Public Health Association, now in session in this city. Dr. Alsberg's subject related to the limitations of the Federal Food Law.

The following is an abstract of his remarks:

Forty-eight states must rigidly inspect and control all easily contaminated foods and drugs produced within their borders. These include such foods as milk and other dairy products, water, fish, shell-fish, many meat products, candy and, indeed, all food that is eaten raw or shipped exposed to the air. Each state owes this protection both to its own citizens and to those of other states who buy its products.

The individual state must guard the health of the state. The federal authorities cannot do this work for the states. The federal authority, under the Food and Drugs Act, extends only to food products entering into interstate commerce, and transmission of disease through infected food and water is not wholly an interstate matter. Disease frequently is of local source and local spread. The Food and Drugs Act is not an effective weapon against the spread within the state borders of disease-producing organisms in food. The federal authorities cannot interfere with domestic commerce, but the state health officers are under no such limitations. Moreover, the federal authorities have no right of entry and inspection into food factories within the state lines. A factory can be run under the most unsanitary conditions; milking may be done by a man recovering from scarlet fever, or milk may be produced on a farm where a member of the family is suffering from typhoid, and the federal authorities have no power to act. Even if these products are shipped across the state line and samples are taken, there is no method for analysing a product which can supply evidence that the food is produced in unsanitary ways or within contaminating reach of epidemic or endemic diseases. The state authorities, however, can enter these factories, need not wait for shipment across state lines, and therefore, provided only that their laws are efficient and the funds at their disposal adequate, can prevent the sale of these deadly unlabeled foods.

FOOD AND DRUGS ACT LARGELY AN ECONOMIC MEASURE.

The Food and Drugs Act, as administered in the past has been very largely an economic measure. It has, to be sure, prevented very largely the mixing of active poisons in hurtful quantities with food products, but its particular work has been to see that food products are properly branded, so that the consumer knows

what he is getting and is not cheated into paying a high price for a product adulterated with a cheapener. This must of course always be one of the purposes of the act; but we must not be deceived into believing that this very important economic function of the act is of great hygienic significance. Misbranding does not demonstrably affect the death rate of the country. If the efforts devoted to prevention of misbranding were to be concentrated more largely upon the suppression of the traffic in contaminated milk, meat, vegetables and other products that may carry disease, a positive reduction of the country's death rate would inevitably result. At best, however, the federal authorities under the Food and Drugs Act can deal only with such of these bacteria-carrying products as chance to enter interstate commerce.

FOOD AND DRUGS ACT USEFUL MAINLY TO BIG CITIES.

The federal control of interstate commerce has in the past, and will have to be in the future, of more benefit to the large cities than to the small towns and rural communities, because the large cities even though in the center of the state draw their supplies to a far greater degree through interstate commerce than do the small towns and rural communities. The help that the federal inspectors can extend to the rural communities, therefore, is absolutely limited to those settlements which happen to be near the borders of the state and so receive some of their easily contaminated foods through interstate commerce. The rural communities in the hearts of the states seldom obtain these unlabeled and possibly dangerous foods through interstate shipment. They get their food of this kind almost wholly in domestic commerce. Their milk comes from nearby farms. Their meats, if not slaughtered locally, come from nearby cities. Their fish and shell-fish may be shipped to them from sea-food centers in the nearest large towns within their state borders.

70,000,000 PEOPLE WITHOUT COMPLETE FOOD PROTECTION.

It is unfortunate that the large cities derive such preponderating advantages from the federal control of interstate commerce. I say unfortunately advisedly, because the large cities need federal protection far less than the small town or rural community. The reason is that

systematic health protection work in the United States is largely confined to the big cities.

In many states the large cities are the only points which have any real sanitary protection. Our rural population of 49,000,000 people, including the 30,000,000 who live on farms, with the exception of those fortunate rural dwellers in one or two exceptional states which regard the health of the country people as also important, receive very little state health protection and maintain no local protective system of their own against contaminated local milk, meat, shell-fish, fish or vegetables. Moreover, only a small number of these rural inhabitants are safeguarded, by competent inspection, against polluted water supply or sewage disposal methods dangerous to health and life.

To this rural and unprotected population we can add the bulk of the 14,000,000 people who live in towns, cities and suburbs of less than 25,000 inhabitants, excepting those here and there who happen to dwell in the more progressive towns, or in those few hamlets located in the exceptional states that have already awakened to the importance of rural sanitation. If we wished we could go even further and add the populations of many cities of 25,000 or 50,000 people which maintain no health officers; and of those cities which have health officers but so cripple them with poor laws or ordinances, or with insufficient funds, as to make their food inspection work most ineffective. I mean cities, for example, where boards of health are practically powerless under the law to seize milk except when it is actually watered or skimmed. These health officers must look on helplessly while milkmen send milk so dirty, or from such dangerous, disease-breeding places, as to make it a menace to the consumer. To prevent this deplorable condition it is absolutely necessary that uniform standards of bacteriological cleanliness as well as chemical composition be established. Bacteriological control is absolutely necessary to prevent the spread of contagion.

The probability, therefore, is that there are upward of 70,000,000 out of our 91,000,000 people who have no efficient and systematic protection from the major causes of the spread of typhoid, tuberculosis, deadly intestinal diseases of infants, scarlet fever, septic sore throat, trichinosis, and other ailments resulting from the circulation of disease producing organisms.

LICENSE OF PHYSICIANS SHOULD BE CANCELLED FOR FAILURE TO REPORT CONTAGIOUS DISEASES.

We must not let ourselves be blinded by statistics, for the statistics of disease in the United States are notoriously unreliable. For certain sections no attempt whatever is made to collect them. I need not tell an audience such as this that reliable statistics are the basis of all health protection. Until severe penalties are inflicted for failure to report cases of infectious diseases, until failure to do so results in the cancellation of the license to practice medicine there will be no really reliable statistics. And this will only be brought about when the state health services throughout the land furnish a permanent career for life instead of being, as they are but too often at present a side-line of politics—medical or otherwise. And these services should furnish a career like the federal Civil Service, to sanitary engineers and chemists as well as to physicians. The people must learn that their health is too valuable to entrust to temporary health officers or to physicians who devote to the discharge of their duties as health officers, only such irregular moments as can be spared from their private practices.

RURAL DEATH STATISTICS INACCURATE.

The sections of the country in which, is already stated, little or no attention is paid to keeping records of disease are rural. The large cities keep some sort of record because attention to health protection and to easily contaminated foods is centralized almost wholly in the cities. With rare exceptions the effectiveness of the protective work depends on the individual city, rather than on a state-wide law or a state-wide and efficient health inspection system. Therefore, the collective figures of urban deaths, look more significant but if we could make an accurate total of the deaths on farms from the same causes, the figures would be appalling. In the country a man dies of "fever" or a "cough." The cities would announce that he died of "typhoid" or "tuberculosis." In the country babies fed on bad milk just die. In the city they die of accurately defined intestinal disorders and when the infantile death rate mounts, rigid milk inspection follows. In the cities, typhoid is often traced to its source and protective measures invoked. In the country the dangerous well or

infected food supply usually continues to work havoc.

FOOD PROTECTION IN GREAT CITIES MAKES RURAL CONDITIONS WORSE.

One might suppose that where a city adopts and enforces a good health protection system, the educative effect of this must necessarily extend to the adjacent rural and suburban population. The truth is that an effective city health protective plan, where the surrounding rural districts have no adequate state or local protection, makes food conditions worse instead of better in the surrounding country districts. For example, Pittsburgh, Pa., and Cleveland, Ohio, have effective milk inspection. The health officer of one city notifies the health officer of the other city when milk entry has been refused to a certain dairy. This prevents that dairy from offering its refused milk to the other city. The results naturally would be that the producers of bad milk refused sale in these two larger cities could readily dispose of their product in the smaller places like McKees Rocks, Sewickley, Beaver Falls, and Coraopolis, which might have no effective milk inspection systems. The same thing is happening in many New Jersey towns. Milk refused entry into New York City by the board of health is sent to towns like Perth Amboy, which may have health officers, but which do not provide them with funds enough for efficient milk inspection work and to carry on expensive prosecutions.

DEPARTMENT CAN HELP RURAL COMMUNITIES NEAR STATE LINES.

The Department of Agriculture feels that it should give more attention to the protection of these rural communities. This means that the work hitherto largely confined to detection of the presence of preservatives in labeled foods which do not carry organic diseases, and the prosecutions for misbranding which might work a monetary fraud on the consumer, should be widely and rapidly extended to the control of interstate commerce in the dangerous unlabeled foods which can transmit and which do transmit serious diseases.

Plans for extending this work to interstate shipments of milk all over the country have already been made. It is the plan of the department to do more than exercise merely police control over interstate shipments. Plans have been made at the same time to show the milk pro-

ducer how to produce better milk, and also to show him that it will pay him to produce his milk under the best conditions. The educational and the regulatory work will go on together—an ancient combination much used by the old fashioned school teacher who taught by precept when he could and resorted to the switch when he had to.

The only help that the department's work in the rural communities around the state's edges can be to the country districts in the heart of the state is to educate, through example and by means of publicity, the rural population throughout all the states to demand of the state that it extend to them the same protection now enjoyed by the large cities against preventable disease disseminated through their food. It is along these lines that the state officials can cooperate with the federal government. They can help to arouse the public to demand effective state-wide measures in all the states, and to insist on an efficient, permanent staff of health officials, and rigorous supervision of the preparation of all foods liable to contamination and pollution. The Department of Agriculture will do its duty not merely in exercising control over interstate commerce, but also in helping food producers bring their food up to proper quality, and it will thus add materially to the available supply of honest and safe food in the country. The great purpose of the Department of Agriculture is a constructive one, namely, not merely to punish adulterators of food, but to help honest manufacturers to discharge their duty to the community by supplying wholesome products. The actual detection and closing of dirty or unsanitary factories and dairies, or the compelling of their owners to mend their methods, must, however, rest with the states.

GOVERNMENT WARNS PUBLIC AGAINST FRAUDULENT RADIOACTIVE WATERS.

Washington, D. C.—The U. S. Department of Agriculture, through the Bureau of Chemistry, today issued the following warning to the public in regard to the so-called radioactive mineral waters offered for sale in bottles.

"There are indications of the beginning of an attempt to perpetrate a great fraud on the American people through advertising certain mineral waters as possessing radioactivity. These waters, in some cases, are taken from springs,

the waters of which as they come from the ground do possess certain radioactive properties. Examination of many of these waters by the department's specialists indicate that whatever radioactivity they possess at the spring is due almost entirely to radium emanation rather than to the presence in the water of any substance possessing radioactivity. These emanations in the form of gas quickly disappear from the water and as a result, after the water has been bottled a short time, it will possess practically no radioactivity. The belief long held by many people that some mineral waters used at the springs are more effective than when bottled has been explained by some authorities on the ground that the beneficial effect of these waters is due to radioactivity. As the radioactivity disappears soon after the water is taken from the spring, any effect due to the radioactivity must be lost in a short time. If the radioactivity of a water in a spring is 100, four days after bottling it will be only 50 and twelve days after bottling 10. In a month it will be practically nothing compared with the original radioactivity of the water at the spring. The public, therefore, is warned to regard with suspicion any water advertised as possessing radioactivity. As far as the government's specialists have been able to ascertain, no bottled water, no matter how radioactive it may have been at the spring, retains this radioactivity for any length of time.

"The department is now investigating a number of the so-called radioactive waters with the object of securing evidence that can be made a basis of prosecution for misbranding. In the past before the Food and Drugs Act was enacted, a number of mineral waters made claim to curative properties which they did not possess and succeeded in creating a misplaced confidence on the part of the consumers. This was particularly true of a number of imported waters which were sold extensively in the United States with a statement on the bottle that they were wonderful or magical cures for all sorts of incurable or chronic ailments. The Treasury Department, acting in cooperation with the Department of Agriculture, now refuses admission to the country of foreign waters labeled so as to mislead consumers as to their real or curative properties. The department fears that unless the public is warned that the fraudulent trade in so-called radioactive waters will develop, just

as the fraudulent trade in other mineral waters was developed to the point where people with strong imaginations will supply their bottlers with all sorts of testimonials asserting that these supposed radioactive waters have effected wonderful cures."

BAIT IN INSECTICIDES NOT POSSESSING INSECTICIDAL ACTION IS AN INERT MATERIAL.

Washington, D. C.—That flour and other ingredients of insecticides which act as bait or food to attract the insects, but do not possess insecticidal properties are inert ingredients, has been established by a decision in a case brought against "Peterman's Roach Food," under the insecticide act of 1910. The question arose in the seizure of 30 dozen packages of "Peterman's Roach Food" in Baltimore, Maryland, on the allegation that they were misbranded.

This misbranding was alleged because the analysis showed the product to contain certain inert substances, such as wheat flour and other substances which in themselves do not prevent, destroy, repel or mitigate insects and the names and percentages of these inert substances were not stated on the label, nor in lieu thereof did the label state the names and percentage amounts of the ingredients having insecticidal properties and the total percentage of the inert ingredients.

The Calvert Drug Company of Baltimore in its answer to the libel stated that the inert substances were in the nature of food or bait attractive to such insects and necessary in the preparation to induce these insects to eat or take into their mouths the other substances which do destroy insects.

The court, after hearing the arguments, entered a decree condemning the goods libelled and seized as misbranded but provided that said goods should be released on condition that the claimants file a sufficient bond that they would not sell the goods until the names and percentage amounts of each and every inert ingredient in the roach food should be stated, or in lieu thereof, the correct names and percentage amounts of each and every ingredient having insecticidal properties and in addition thereto the total percentage of inert ingredients present should be stated on the packages.

CASE HISTORIES OF

6324 PATIENTS

TREATED WITH PHYLACOGENS
HAVE BEEN SENT TO US
BY THE ATTENDING PHYSICIANS.

THEY SHOW

5270 RECOVERIES-83%

IS NOT THE THERAPEUTIC WORTH OF THE

PHYLACOGENS

PROVED BY THESE CLINICAL REPORTS?

SEND FOR LITERATURE.

PARKE, DAVIS & CO.

DETROIT, MICH.

THERAPEUTIC NOTES.

TRANQUILITY DURING GENERAL INFECTIONS.—One of the most urgent needs during a severe general infection, typhoid fever for instance, that of securing rest for the patient, is satisfactorily secured by means of Pasadyne (Daniel). The advantages of this product for the purpose named will be better appreciated when it is recalled that Pasadyne is the concentrated tinct. of *Passiflora Incarnata* compound, the above name being employed to distinguish Daniel's product from others. Pasadyne (Daniel) possesses soporific properties in a marked degree with the further advantage that it is free from the disagreeable after effects of other potent hypnotic agents. Pasadyne (Daniel) may be advantageously employed whenever a sedative is indicated.

THE RANGE OF PASADYNE'S USEFULNESS.—To those who have long employed Pasadyne (Daniel) and are well acquainted with its distinct value in medicine, it will not be fresh information to be assured that Pasadyne (Daniel) has as wide a therapeutic range as any agent of similar character, and with the added advantage of freedom from untoward effects.

In writing of *Passiflora Incarnata*, and of course it is scarcely necessary to mention that Pasadyne is merely the distinctive name for Daniel's Concentrated Tincture of *Passiflora Incarnata*, Potter says that "it has been administered with satisfactory results in neuralgia, chorea, spasmodic asthma, pertussis, hysteria, dysmenorrhea, insomnia, infantile and puerperal convulsions and the opium habit.

A sample bottle may be obtained by addressing the Laboratory of John B. Daniel, Atlanta, Georgia.

THE EFFECT OF STIMULATING CELL NUTRITION.—In many conditions of a chronic character improvement may be expected to follow the use of agents calculated to influence nutrition of the individual cells. Thus, if the cells be stimulated to better assimilation and elimination, diseased states due to interference with these normal functions of the cellular constituents of the vital organs must of necessity undergo a change, for the underlying and continuing cause is being altered. The drugs usually employed for this purpose are those termed the alteratives, an efficient representative of which class is IODIA (Battle).

IODIA is a combination of iodide of potash with the active principles of the green roots of *stilligia*, *helonias*, *saxifraga* and *menispermum*. It has been found in severe clinical tests to exert an influence on the vital functions, the explanation of its favorable effect being sought for in the stimulating action of its several constituents on the normal processes of the body's cells. In chronic gout and rheumatism, glandular diseases and chronic affections of the skin IODIA will offer evidence of its therapeutic value.

Neurosine is composed of drugs recognized by the profession as of standard medicinal properties. Unexcelled in insomnia, hysteria, epilepsy and neurasthenia, Neurosine is presented in a most permanent and palatable form, an elegant and efficient combination of well-known and long-tried remedies, the virtues of which, in the diseases and conditions

indicated, there is absolute unanimity of expression among all observers and authors upon this subject. Neurosine contains no morphin, chloral or other habit forming drugs. The Dios Chem. Co., St. Louis, will send samples by mail to physicians on request.

MORE PHYLACOGEN FIGURES.—"Case histories of 6,324 patients treated with Phylacogens have been sent to us by the attending physicians. They show 5,270 recoveries—83 per cent."

This statement has just been issued over the signature of Parke, Davis & Co., and a very impressive pronouncement it is. If there are members of the medical profession who have been wont to question the therapeutic efficacy of the Phylacogens, that "83 per cent. of recoveries" should quickly remove their skepticism.

SCHOOL CHILDREN BELOW PAR.—The difficulty some pupils have in keeping up with their school work is so obviously due to physical deficiency that even parents recognize the disadvantage under which such children labor. These little patients show a listless manner, and only with marked effort do they maintain a creditable standing in their classes. It is in such instances that Cord. Ext. Ol. Morrhuæ Comp. (Hagee) has a particular field of usefulness. Being a tissue food in every sense of the word, its administration adds a vigor which quickly manifests itself in a large capacity for both physical and mental effort. Cord. Ext. Ol. Morrhuæ Comp. (Hagee) enriches the blood stream and brings about an increase in bodily weight. A superior feature of this preparation is its palatability, as a result of which it may be continued over long periods of time without the production of nausea or other annoying consequences.

AN ALLY WORTHY OF CONFIDENCE.—It is going on toward 20 years since Gray's Glycerine Tonic Comp. was first placed at the service of the medical profession. During all this period Gray's Glycerine Tonic Comp. has maintained the standards that first attracted attention and the busy practitioner has ever found it an ally worthy of confidence. It never disappoints and in the treatment of atonic conditions, particularly of the gastro-intestinal tract, it is often the one remedy that will produce tangible and satisfactory results. The physician who does not use it in his practice is denying his patient many benefits that can be obtained in no other way.

CHRONIC CATARRHAL DISEASES.—Chronic catarrh never fails to indicate general constitutional debility. Local treatment is always desirable but for permanent results efforts must be directed toward promoting general functional activity throughout the body, and a general increase of systemic vitality. The notable capacity of Gray's Glycerine Tonic Comp. in this direction readily accounts for the gratifying results that can be accomplished through its use in the treatment of all chronic catarrhal affections, but especially those of the gastro-intestinal canal and respiratory tract. The particularly gratifying features in the results accomplished by Gray's Glycerine Tonic Comp. are their substantial and permanent character. This is naturally to be expected since they are

brought about through restoring the physiologic balance of the whole organism.

VASO-MOTOR DERANGEMENTS.—The part played by the vaso-motor system in countless diseases is at last thoroughly recognized. As a consequence, circulatory disorders are among the most common functional ailments that the modern physician is called upon to correct. Various heart tonics and stimulants are usually employed, but the effect of these is rarely more than temporary. To re-establish a circulatory equilibrium that offers real and substantial relief from the distressing symptoms that call most insistently for treatment requires a systematic building up of the whole body. Experience has shown that no remedy at the command of the profession is more serviceable in this direction than Gray's Glycerine Tonic Comp.

For nearly 20 years this standard tonic has filled an important place in the armamentarium of the country's leading physicians. Its therapeutic efficiency in restoring systemic vitality and thus overcoming functional disorders of the vaso-motor or circulatory system is not the least of the qualities that account for its widespread use. The results, however, that can be accomplished in many cases of cardiac weakness have led many physicians to employ it almost as a routine remedy at the first sign of an embarrassed or flagging circulation.

RIGHT-SIDED ABDOMINAL PAIN IN WOMEN.

In discussing this subject the author points out that the cecum often complicates the diagnosis in cases where this type of pain is present. The cecum often lies in the true pelvis, especially in women who have borne children, and it is by no means uncommon to find the pelvis entirely occupied by a cecum distended with gas, such a condition of this organ rendering it often a source of vague pain. A case of this kind is referred to by the writer, in which an indefinite swelling, supposed to be an ovarian cyst, could be felt in the right iliac fossa. On percussion, however, it yielded a high resonant note. The patient being in acute pain, it was decided to incise the abdomen, when the swelling was found to be due to an enormous accumulation of gas in the cecum; the pressure being so great as to cause the peritoneal coat to split in two places. The cecum had partially twisted on its axis. The gas was evacuated through a puncture, the edges of the small opening being tacked to the margins of the incision as a safeguard, and an admirable and permanent recovery resulted.



Glyco-Thymoline is of benefit for teething babies; a little rubbed on the gums, rapidly reduces the inflammation and conserves the little one's comfort.

Used for flushing the colon, it eliminates all septic matter, preventing autointoxication and reducing the temperature.

Glyco-Thymoline used internally corrects hyperacidity and prevents fermentation.

Kress & Owen Company

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An important form of pain in the right flank is associated with a painful anal fistula. The pain during defecation in the presence of the latter condition often causes patients to avoid this act as much as possible, and occasionally the spasmodic action of the sphincter so interferes with the regular emptying of the bowel that the colon and cecum become abnormally distended. In these cases the more or less constant pain in the right flank has led the practitioner to attribute it to ovaritis, appendicitis, and in older women to cancer. In many cases the author has found chronic right-sided pain associated with a painful anal fistula to be cured by dilating the sphincter under an anesthetic, and then clearing out the bowels with a dose of castor oil.

Some of the most misleading cases are those in which young women have been treated for indigestion supposed to depend on a chronic ulcer of the stomach when the appendix has been the cause. When gastric symptoms are sufficiently severe to warrant an operation and the surgeon finds the stomach normal on inspection, it is his duty to examine the vermiform appendix and he will often find it abnormal. Its removal in such a case will more certainly give relief than the gastrojejunostomy formerly recommended.

In dealing with persistent right-sided abdominal pain, where it is impossible after careful clinical examination to decide which organ is at fault, and the patient's condition is such as to justify operative interference, it has been the author's custom to make a fairly free incision in the line of right linea semilunaris and systematically examine the organs on the right side of the abdomen. This incision allows of examining the pelvic organs, including the ureters, cecum, appendix, kidney, gall-bladder and ducts, pancreas, duodenum, pylorus and liver. It also has the advantage of permitting the surgeon to deal with conditions requiring surgical treatment in almost any of the organs mentioned. It occasionally happened that nothing could be seen to account for the pain, and in a few cases some unexpected pathological conditions were found. Occasionally an operation revealed the presence of serious and painful disease in young women who had been treated as hysterical by their parents and physician.—Gland-Sutton, in *The London Practitioner*.

SOME OFFICIAL DRUGS AND PREPARATIONS.

One of the foremost aids in the relief and cure of sickness and disease is the mastery of drug combinations. Some drugs act best alone but in the majority of cases a drug's action is often greatly augmented by being combined with others to assist its action, to correct any undesirable action or in making a more palatable mixture.

A study of the compound preparations in the Pharmacopeia and the National Formulary, especially the latter, affords many striking examples of such methods of combination and these are worthy of most careful study; this will greatly aid the medical practitioner in devising his own prescriptions.

CONSIDER THE PATIENT FIRST.

While the tendency of the times for some reason or other may be towards simple (or single) medicaments, and away from the compound and complex, there is danger, however, in carrying this simplicity too far, for there is no doubt that proper combinations of medicines will often produce effects for the *patient's good* which could not be obtained from the use of any one remedy separately.

An example may be taken in castor oil, which well illustrates two points: First, its disuse by many physicians owing to its objectionable taste; and second, how to overcome this taste by combination. Castor oil is a valuable remedy and in making a palatable dose, we "kill two birds with one stone," namely, we save to the profession a valuable drug, and we also produce a mixture agreeable to the patient.

In the National Formulary there is an official emulsion of castor oil (Emulsion Olei Ricini, N. F.), which is really a very fine and palatable preparation. It contains 32 per cent. of castor oil, emulsified with acacia and water, sweetened with syrup and flavored with vanilla. Usually the pharmacist may be allowed to use his discretion in preparing a palatable mixture of this nature, but it is well that physicians be familiar with the contents of such. Close cooperation with the pharmacist is of great benefit in such cases.

A CASTOR OIL PRESCRIPTION.

The physician may desire a different emulsion for a patient than the N. F. preparation yields

and in that case he might prescribe castor oil emulsified with yolk of egg and flavored with ginger and cinnamon. Such a prescription would appear as follows:

℞ Olei Ricini $\bar{5}$ i
 Vitellii
 Syrupi Zingiberis $\bar{5}$ iv
 Aquae Cinnamomi, ad. $\bar{5}$ iv

Again, a physician may wish to prescribe for a case of bedsores, and having in mind the use of balsam of Peru and iodoform, would prescribe an ointment containing these drugs, mixed possibly with lard of petrolatum. Now neither lard nor petrolatum alone will make a good ointment with these drugs, but if a little solid petrox (Petrolatum Saponatum Spissum, N. F.), castor oil or wool fat be added a very fine ointment will result.

A SPECIAL LAXATIVE.

There may arise an occasion when the general laxatives might not meet the physiological conditions present, especially when a tonic laxative seems to be indicated; such as in acne rosacea, erythema multiformae, urticaria, etc. By combining common table salt and sulphate of iron with epsom salt, a very good mixture will result, somewhat after the following formula:

℞ Magnesii Sulphatis $\bar{5}$ i
 Ferri sulphatisgr. iv
 Sodii Chloridi $\bar{3}$ ss
 Acidi Sulphurici Diluti $\bar{5}$ i
 Infusi Quassiae, ad. $\bar{5}$ iv

Such a mixture may be given in tablespoonful doses in a glass of water about half an hour before breakfast, to patients who are robust and where conditions would demand such a combination.

Again asafetida may be indicated but the physician is loath to prescribe it. Its horrid taste, combined with the fact that this drug formerly was only of indifferent quality, has placed this therapeutic agent on the back shelf as useless. However, the quality has lately much improved and by specifying the drug of the Pharmacopeia, a good article may be secured. Palatability is secured by prescribing as follows:

ERGOAPIOL (Smith)

For
**AMENORRHEA
 DYSMENORRHEA
 MENORRHAGIA
 METRORRHAGIA
 ETC.**

ERGOAPIOL (Smith) is supplied only in packages containing twenty capsules.

DOSE: One to two capsules three or four times a day.

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R Asafetidae, U. S. P.	5v
Syrupi Tolutani	5iii
Tincturae Vanillae	5ii
Olei Anisi	minims xxx
Aquae Cinnamomi, ad.	5xvi

The average dose of this would be one tablespoonful. When such a prescription is handed the pharmacist, he will proceed and make an emulsion of the asafetida with cinnamon water. The flavors and sweetening are present in such a mixture to produce a very satisfactory preparation and one that is palatable.

The case of phenolphthalein offers another instance where a special prescription is most valuable. This drug is often prescribed in the objectionable tablet form and also appears in the form of a specialty under various fanciful names. By combining it with aromatics as in the following prescription a palatable and most active therapeutic mixture may be obtained.

R Phenolphthalein	5iii
Alcoholis	5i
Elixir Taraxaci Compositi	5ii
Elixir Aromatici, ad.	5viii

This elixir contains nearly 3 grains of phenolphthalein to a teaspoonful dose. The dose, may of course, be varied as required.

The drug may also be prescribed with chocolate syrup, which yields a most excellent and palatable preparation; also as a compound pill prescribed with small quantities of the extracts of cascara sagrada, nux vomica, and belladonna. Instead of the pill form, the mixed powders may be enclosed in capsules.

SYRUPUS RHEI ET POTASSII COMPOSITUS, N. F.

The compound syrup of rhubarb and potassa or as it is frequently called, neutralizing cordial, has marked powers as an antacid and carminative stomachic. As its formula will indicate, its application has a wide range of usefulness in various stomach and intestinal ailments. The average dose of this syrup is 4 cc. (1 fluid dram). Each dose represents approximately $\frac{1}{2}$ grain of golden seal, $\frac{1}{2}$ minim of spirit of peppermint, 1 grain each of rhubarb, potassium carbonate and cinnamon, and 13 grains of sugar. The alcohol content is 40 per cent.

This palatable preparation is deserving of great popularity. Many practitioners use it in combination with pancreatin, some with nux

vomica and bromides and various other combinations are useful.

MURDER.

If you break quarantine you become a spreader of disease; in other words, you become a MURDERER.

What would you do to a person who killed your child this way?

How many children have you killed?

No HUMAN being will visit the quarantine sick and then associate with the well; INHUMAN beings do.

Don't break quarantine and spread disease; in other words, don't be a MURDERER.

Keep your children away from children who have their throats tied up.

DOCTORS who do not report their cases of contagious diseases are well-known enemies of children as well as mothers and fathers who expose their children to contagious diseases believing that children must have such disease.

Permit SUNSHINE to flood your home and admit it into your life.

Stick close to the simple life.

Do not patronize the dirty milkmen, fly infested market and restaurant, unprotected fruit and candy stands or other health menacing agencies.

The best spring tonic is pure air and sunshine.

How about your children? Are their births registered? If not, are you treating your children right? An official birth record is the best proof of legitimacy, of descent, of right to inherit and of age, for schooling, for work, for voting and for marriage.

Despise the wretches who break quarantine and slaughter little children; smite them if you can't inform the Health Officer.

All persons are forbidden to enter or leave quarantined premises without special permit from the Health Officer having jurisdiction. The PENALTY: A fine of TEN to FIFTY dollars, to which may be added imprisonment.

FOR A CLEAR CONSCIENCE OBSERVE QUARANTINE.

DR. C. A. ZINN,
Clinton County Health Commissioner.
Frankfort, Indiana.

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The Medical Department of the University of Vermont will appreciate it very much if any of the Alumni can furnish catalogues of the Medical Department of the following dates to complete the files, 1857-66-7-8-9-71 and 73. These may be sent to the Dean.

Both ether and chloroform anesthesia have a hemolytic effect, which is followed by a compensatory polycythemia. It is followed also by 30 per cent. increase in the leucocytes, which begins during anesthesia and lasts for about 24 hours. Leucocytosis is also induced by saline infusions and purgation.

Simple perforation of the uterus during a curettage in an aseptic field requires no further treatment than a packing of gauze in the uterus.

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Burlington, Vermont.

MAN.

Man is born of woman, is of few days and full of microbes.

He cometh forth like a flower, but is soon wilted by the winds of adversity and scorched by the flames of perplexity.

Sorrow and headache follow him all the days of his life.

He hoppeth from his bed in the morning and his foot is pierced by the cruel tack of disappointment.

He ploddeth forth to his daily toil and his cuticle is punctured by the malignant nettles of exhaustion.

He sitteth himself down to rest at noonday, and is lacerated in his nether anatomy by the pin of disaster.

He walketh through the streets of the city in the pride and glory of his manhood, and slippeth on the banana peel of misfortune and unjointeth his neck.

He smoketh the cigar of content, but, lo! it explodeth with a loud noise, for it was loaded.

Behold he glideth down the bannister of life and findeth it strewn with splinters of torture.

He is stung by the mosquitoes of annoyance by day and his frame is gnawed by the bedbugs of affliction by night.

What is man but the blind worm of fate? Seeing that his days are numbered by cycles of pain and his years by seasons of mourning.

Behold he is impaled upon the hook of desolation, and is swallowed up by death in the fathomless ocean of time and is remembered no more.

In his infancy he runneth over with worms and colic, and in his old age he groaneth with rheumatism and ingrowing toe-nails.

He marryeth a cross-eyed woman because her father hath a bank account, and findeth that she is ridden with hysteria and believeth in witches.

His father-in-law then monkeyeth with stocks and goeth under.

What is man but a carbuncle on the neck of existence? Yea, but a tumor on the back of fate?

He playeth the races and staketh his substance on the brown mare because he hath received a tip. The sorrel gelding with a bald face winneth by a neck.

Behold he runneth for office and the dead beat pulleth him ever and anon and then voteth against him.

He exalteth himself among the people and swelleth with pride, but when the votes are counted he findeth that he was not in it.

He boasteth of his strength in Israel, but is beaten by a bald-headed man from Taller Creek.

He goeth forth to breathe the fresh air and to meditate on the treachery of earthly things, and is accosted by a bank cashier with a sight draft for \$127.39.

A political enemy lieth in wait for him at the market place and walketh around him crowing like unto a cock.

For behold his pious friend is full of guile and runneth over with deception.

From the cradle to the grave man giveth his alms to him that smiteth him.—*Medical Brief*.

DRUG ERUPTIONS.

A number of drugs in common use produce a characteristic eruption, and these should always have careful scrutiny by the physician lest they be mistaken as an original disease.

Here is a list of commonly used drugs which at times produce eruptions, itching, eczema and other manifestations:

Biomide of potassium: papules, pustules, ulcers, echymoses and pemphigus.

Chloral: erythema, itching desquamation, eczema and petechia.

Copaiba and cubebs: pemphigus, erythema and eczema.

Aconite: vesicular exanthemata.

Arsenic: erythema, papules, vesicles, and sometimes pustules.

Iodide of potassium: about the same as arsenic, but more marked.

Mercury: erythema and eczema.

Morphine: erythema, papular eruption and sometimes desquamation.

Phosphorus: purpura.

Quinine: erythema, eczema, hemorrhagic purpura, pemphigus and sometimes a typical urticaria with dyspnea.

Rhus toxicodendron: vesicles, pruritus, redness and swelling of the skin.

Salicylic acid: purpura, pemphigus and vesicular angina.

Santonin: vesicles and pemphigus.

Belladonna, strychnine and stramonium may produce about the same dermal manifestations as quinine; while turpentine produces an eruption like that of copaiba.—*Medical Sentinel*.

Cystogen

$C_6H_{12}N_4$

A preferred product of hexamethylene tetramine remarkably free from irritating properties.

PHYSIOLOGICAL ACTION

Genito-urinary antiseptic and uric-acid solvent in doses of gr., V-X t. i. d.; increases the excretion of urine and of uric-acid. It causes the urine to become a dilute solution of formaldehyde with antiseptic properties. Specially valuable as a diuretic and urinary-antiseptic in *cystitis*, *pyelitis*, *phosphaturia*, *before surgical operation on the urinary tract*; *during the course of infectious diseases to prevent nephritis*; and *as a solvent and eliminant in rheumatism and gout*.

When given in large doses, gr. X to XV, four times daily it is found in the saliva, secretions of the middle ear and nose, cerebrospinal fluid, bile; in short, in practically all secretions and excretions of the body, and hence its use as an antiseptic is indicated in *Rhinitis*, *Otitis Media*, *Sinusitis*, *Bronchitis*, *Influenza* and many other conditions which will at once occur to the clinician.

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Vermont Medical Monthly

Official Organ of the Vermont State Medical Society.

Vol. XIX, No. 10.

Burlington, Vt., October 15, 1913

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TABLE OF CONTENTS

ORIGINAL ARTICLES:—

One Hundred Years of Medicine in Vermont,

By B. H. Stone, M. D.235

Acute Inflammation of the Middle Ear,

By Leo A. Newcomb, M. D.245

Appendicitis,

By George S. Foster, M. D.249

EDITORIAL253

NEWS ITEMS254

BOOK REVIEWS255

AN EPITOME OF CURRENT MEDICAL LITERATURE...256

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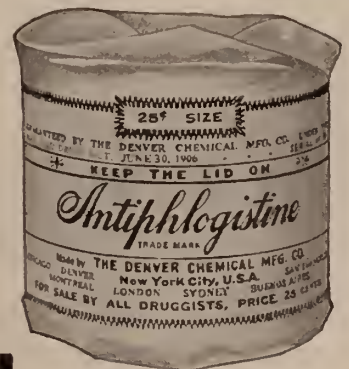


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A ligature should not be placed on the carotid too near the bifurcation lest the clot which forms shall not have sufficient surface to which to adhere and become detached and swept to the brain.—S. S.

MEDITATIONS ON A SKELETON.

Behold the ruin! 'Twas a skull
 Once of ethereal spirit full!
 This narrow cell was Life's retreat;
 This place was thought's mysterious seat!
 What beauteous pictures fill'd this spot,
 What dreams of pleasures, long forgot!
 Nor Love, nor Joy, nor Hope, nor Fear,
 Has left one trace of record here.

Beneath this mouldering canopy
 Once shone the bright and busy eye—
 But start not at the dismal void!—
 If social love that eye employed,
 If with no lawless fire it gleamed,
 But through the dew of kindness beamed,
 That eye shall be forever bright,
 When stars and suns have lost their light.

Here, in this silent cavern, hung
 The ready, swift, and tuneful tongue,
 If Falsehood's honey it disdained,
 And where it could not praise was chained;
 If bold in Virtue's cause it spoke,
 Yet gentle Concord never broke;
 That tuneful tongue shall plead for thee,
 When death unveils eternity.

Say, did these fingers delve the mine,
 Or with its envied rubies shine!
 To hew the rock or wear the gem,
 Can nothing now avail to them;
 But if the page of truth they sought,
 Or comfort to the mourner brought,
 These hands a richer meed shall claim
 Than all that waits on wealth and fame!

Avails it whether bare or shod
 These feet to the path of duty trod?
 If from the bowers of Joy they fled
 To soothe affliction's humble bed;
 If Grandeur's gilded bribe they spurned,
 And home to Virtue's lap returned,
 These feet with angel wings shall vie,
 And tread the palace of the sky!

—*Delaware State Medical Journal.*

BROMIDE INTOLERANCE AND BROMIDE POISONING.

L. Casamajor (*Jour. Nervous and Ment. Dis.*, June) warns that the toxicity of the bromine salts is oftentimes overlooked. They may excite delirious states. No weak or anemic patient should receive even small doses without a full realization of the danger; in such cases the use of the bromides as local sedatives is contraindicated; thick-tongued speech, bromide breath and psychic dulness are the poison symptoms, upon the appearance of one or the other of which the drug should be discontinued and large doses of sodium chloride given to replace the bromide; this with vigorous elimination should prevent the drug intoxication.—*Medical Times, N. Y.*

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to one-half teaspoonful.
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When there is disagreement between the pulse and temperature, the pulse must be regarded as of the greater importance.—S. S.

A felon should be aborted by covering the end of the finger with cotton saturated with alcohol, and then excluding the air by drawing over all a rubber finger cot.—S. S.

Traumatic aneurysm, after temporary clamping of the artery, can often be treated by suture if the surgeon goes about it deliberately, when a first impression of the case seemed to demand ligation of the vessel.—S. S.

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Any attempt to trace typhoid infection to the use of uncooked vegetables such as lettuce, watercress and celery is likely to succeed only under rather peculiar conditions. Ordinarily, the distribution of such articles of food to a large circle of consumers, and the difficulty of discovering, several weeks afterward, that such things were eaten, and by whom, are facts that conspire to render us ignorant of the real frequency of such sources of infection. A remarkable typhoid outbreak apparently due to polluted watercress has recently been reported from Philadelphia to *The Journal of the American Medical Association*. At a wedding breakfast, June 24, with forty-three guests in attendance, nineteen persons ate watercress sandwiches, eighteen of whom later developed typhoid fever. Investigation by the Philadelphia Bureau of Health showed strong reason for suspecting watercress to be the vehicle of infection.

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Vermont Medical Monthly.

VOL. XIX.

OCTOBER 15, 1913.

NUMBER 10

ORIGINAL ARTICLES.

ONE HUNDRED YEARS OF MEDICINE IN VERMONT.

BY

B. H. STONE, M. D.

THE PRESIDENT'S ANNUAL ADDRESS.

The physician of one hundred years ago could not confine himself to any limited practice but was of necessity, a general practitioner in the broadest sense. He was obliged to be his own surgeon, obstetrician, ophthalmologist, and otologist, in short he was expected to render aid to all the afflicted in his clientele, regardless of their ailments. The paucity of medical literature, the limitations of medical education and the absence of specialists whom he could summon to his aid in time of perplexity, threw him in action, entirely on his own resources. By reason of this isolation during a large part of his life, occasional association with his professional brethren and interchange of ideas was of tremendous value to him. His training was made up almost entirely of his own observations and practical experience and could only be supplemented by occasional verbal communication with his neighbor practitioners, consequently he realized acutely the need of opportunities for this interchange. Thus we find the pioneer doctors of the new state early organizing themselves into societies. In 1784 the physicians of Rutland and Bennington counties secured an act from the legislature incorporating themselves under the name of the "First Medical Society of Vermont." The objects of this organization were thus set forth in the preamble to the incorporative act. "Whereas it is a matter of greatest importance to the inhabitants of this state that the practitioners of medical art should receive all proper encouragement to incite them to improve and acquire a thorough acquaintance with a science so interesting to those who are put in distress through indisposition of body or limb and where-as it appears by petition that (naming a number

of physicians in the vicinity) formed themselves into a medical association and have formed a constitution for the government thereof, we pray the legislature of this state to patronize and establish the same."

The next medical society was formed in Windham in 1794 and incorporated by the legislature in the same year under the name of the "Second Medical Society in Vermont." Following this, similar organizations were formed in Franklin and Windsor counties in the next few years and finally, on the 6th of November, 1813, an act was passed incorporating the Vermont Medical Society. (The 9th state medical organization to be formed in the United States). The purposes of this organization according to the preamble were to "improve the theory and practice of the different branches of the healing art." The act of incorporation authorized all those practitioners who had heretofore belonged to any medical society under a legislative act or acts of this state, together with one hundred and sixty-six men from the various counties of the state, specified by name, to form societies in their various counties. It gave to these county societies, organized according to the provisions of this act, power to levy taxes upon their members not to exceed \$3.00 per annum from each, to be used for securing libraries, suitable apparatus, or for any other purposes agreed on by the majority. It required these county societies to hold semi-annual meetings in the shire towns of the county at the time of the sitting of the county court for the purpose of establishing and regulating the libraries, receiving and communicating medical information, examining students and transacting any necessary business. It further provided that there should be formed a general medical society composed of three members from each county holding their office for three years, one elected each year, and that the society so formed, should have the power of making rules for its own guidance and the other rights common to all corporative organizations and the further power to receive and determine all appeals either of students or members of the county societies; grant diplomas to any student who might appear to them worthy

to receive the same and who might have been refused the privilege by any county society; to make laws for the county societies in all matters and concerns which were strictly connected with the central society especially in regulating the uniform mode of examination and admission of students to practice. It further provided that proceedings of its own meetings were to be transmitted to the county societies and that it in turn should be furnished with a record of their proceedings "that the most useful and important information may be communicated." In addition to the original act of incorporation, an act was passed by the same legislature making all ex-delegates from the county societies honorary members of the State Society with all the privileges except those of voting on any taxation measure involving the county societies. This legislative act also imposed a fine of \$25.00 on any county medical society neglecting to send one or more of its delegates or proxies to the State Medical Society and empowering the society to examine into the qualifications of its members and upon finding them ignorant in their profession, immoral in their habits, or refusing to comply with the regulations of the society, to expel them by a vote of the majority. The first session of the Vermont State Medical Society was held July 7th, 1814, with fifteen men, representing nine counties, present. At that meeting the society passed a number of by-laws, one of which required the president to give an address. Thus early began the pernicious custom of which you and I are to-day the victims. But those wise men of the past gave to *their* leader, the alternative of paying \$25 into the treasury, a privilege of which the second president, Ezekiel Porter of Rutland, wisely took advantage.

An adjourned meeting was held in October with a full delegation. Subsequent meetings were held every year at Montpelier until 1829.

The difficulties which assailed the early organization seem to have been largely those of its finances. The only provision for raising money was from fines and from the fees collected by the county societies from students applying to them for a license to practice and to whom they granted diplomas. The state society in 1817 voted that \$2.00 of these fees which were \$10.00 in all should be transmitted to its treasurer by the treasurers of the various county societies. This rule seems to have been badly

enforced and the transactions are filled with resolutions requesting the county societies to remit funds. Attendance of county delegations was another stumbling block. The attempt of the state organization to enforce this attendance by the collection of the fine of \$25.00 established by the act of incorporation met with opposition from the county societies. Up to 1820 there had been fourteen such failures and the matter of fines was taken up at this time and the amount cut from \$25.00 to \$10.00 and finally a vote was passed to remit this entirely provided the societies would pay the amounts due from the diplomas. This matter of fines led to much friction between the central society and the county organizations which at times became acute, thus the records of Addison county society show that it voted in 1824 to sever its connection with the state society. In 1826 a resolution was passed to ask the legislature for pecuniary aid. I am unable to find what was done about this but it is safe to assume that it met the fate which might have been expected if the measure was ever introduced in the legislature. At any rate the society was still in straightened circumstances for many years after this.

During this period of the society's existence, we find the office of president held by Selah Gridley of Rutland for three years, Ezekiel Porter of Rutland for one year, Ebenezer Huntington of Rochester for one year and Joseph M. Gallup of Woodstock for eleven years, from 1819 to 1828 inclusive, and by Joseph Shedd for the year 1829. The change from the long period of Gallup regime seems to have been too much for the organization and Joseph Shedd apparently never presided at a meeting. The society remained dormant for the next twelve years.

In 1841 the physicians from several parts of the state gathered together in convention at Montpelier and proceeded to reorganize the state society with Dr. W. R. Ranney, chairman, and Dr. Z. P. Burnham, secretary. The by-laws of the old society were revised. The membership was increased by taking in all regular physicians who had been elected members of the state legislature of the State of Vermont and all such professors of medical institutions of the state who were residents of the state and all who had received the degree of doctor of medicine at some regular medical institution authorized to confer degrees and all members of the county

medical societies, on the recommendation of a member of the society and by a two-thirds vote of members present. A board of councillors was provided to be elected at each annual meeting of the society from its members, consisting of one or more from each county in the state, the numbers not to exceed the number of senators to which each county was entitled. The duty of this board of councillors was to prepare amendments to the constitution and by-laws; to receive communications from the county societies, and to act upon these and any communications submitted to them by the secretary of the state society. In fact they were to transact the business of the society. Meetings have been held annually from that date down to the present time; under this same constitution up to 1851, when another reorganization was effected.

This provided that the membership should consist of any person of "good moral character and temperate habits, residing within the state, who should have received the degree of doctor of medicine from any legally authorized medical school or society who should be approved by a vote of the society and should pay \$1.00 into this treasury and \$1.00 annually thereafter" thus completing the divorcement of the society from the county societies, educational institutions and any other organization. In a by-law adopted by the society at this time it enjoined upon all its members to follow in their true spirit, the code of medical ethics adopted by the American Medical Association. Under this constitution, the society flourished until 1901 when it was again reorganized on a county society basis similar to that in existence at its first organization.

This in briefest outline is the history of the Vermont State Medical Society from its origin to the present time but the details of the history covering a period of marvelous development in prosperity, mechanical achievement and scientific research present a story of energy, effort, progress, culture, and attainment which should fill us all with pride in the fact that we are the logical successors of these stalwart men of the past and inspire us with a determination to avail ourselves of our rich heritage as well as they did of their scanty opportunities. It cannot fail to fill one with amazement to stand at this vantage point of a completed century and try to realize the conditions under which those fifteen men, Doctors Selah Gridley, Ezekiel Por-

ter of Rutland county, Luther Hall and Fred Ford of Addison county, Benjamin Chandler of Franklin county, Erastus Torrey, Elijah Littlefield of Windham county, Calvin Denning, Stephen Pierce and Edward Lamb of Jeffersonville county (now Washington county), John Perigo, William Marsh and John Pomeroy of Chittenden county, met on July 7th, 1814, to establish a State Medical Society. From scattered homes, in all parts of the state, these men were obliged to travel largely on horseback, over rough roads and blazed forest trails, through a country sparsely settled and through forests still filled with their original wild inhabitants. For this society had been in existence seventeen years before the first railway train was run and thirty-one years before the first telegram was sent. The country was at war with the greatest maritime nation of the world and Lake Champlain was in the hands of a hostile fleet. McDonough was building his fleet on the Otter Creek. The people of the state were ready to fly instantly to arms as they did the previous summer (July 30, 1813) in defending Burlington from a lake attack. News of the treaty of Ghent making peace between the United States and England only arrived in America two months after it was concluded and too late to save the two thousand brave souls sacrificed at the battle of New Orleans.

But strange as these conditions, without railroads, telephones or automobiles seem to us, stranger yet were the conditions of that rudimentary medical science which these men practiced and for the improvement of which they were willing to undergo all the obstacles and hardships of this long trip. Medical science was just beginning to emerge from the mysticism, speculation, and superstition of the centuries preceding. John Hunter had lived and died and his impress had done much to clear up the obscurity of physiology and pathology. Jenner was still alive, his treatise on vaccination having been published in 1799. Koch, Morton, Pasteur and Lister were as yet unknown. The clinical thermometer, the stethoscope and all the methods of physical examination upon which so much of modern diagnosis is based were things unknown.

Surgery was just emerging from the hands of barbers and was still looked upon with great disfavor by the best men of the profession. Hos-

pital gangrene was the terror of the surgeon and the bane of hospital treatment. Bell, the surgical authority of the day, says: I do not regard hospital sore as a mere ulcer to be treated like other ulcers but as a general affection of the system, a mortal disease for when it rages in a great hospital it is like a plague; few who are seized with it can escape; 'There is no hospital, however small, airy or well regulated where the epidemic ulcer is not found at times; and then no operation dare be performed. Every cure stands still. Every wound becomes a sore, and every sore is apt to run into gangrene': but in great hospitals especially it prevails and is a real gangrene." The state was just recovering from the terrors of one epidemic and another was beginning. In 1813 the greatest outbreak of fatal disease ever recorded in the state took place. This disease which Gallup calls epidemic peripneumonia followed an epidemic of spotted fever or cerebrospinal meningitis. During five months of that year there were estimated to have been 6,400 deaths in a census population of 217,913 people. All the doctors were overwhelmed with work and many of them fell victims to the disorder.

But hardships and effort were the habit of those early general practitioners, the real fighting men of the profession. Sturdy characters they were who came with the early tide of immigration when the lands between the Connecticut River and Lake Champlain were opened up. Many of them had participated in the struggles of the Green Mountain Boys and the Revolutionary War and they were ready to fight with equal cheerfulness epidemics of disease or the British invader. A journey of 150 miles on horseback through the woods had no terrors for them when it promised anything which would aid them in their unequal struggle with disease.

Great as has been the century's progress in mechanical, electrical and scientific invention, a comparison of medical science of that day with this will show that it has kept the pace. The influence of a few great men of the eighteenth century was just beginning to have its effect. Harvey's demonstration of the circulation of the blood in 1628 had given to scientific medicine a great boom. Boerhaave's rebellion against a multiplicity of noxious drugs was having its effect. A century of laborious research into causes; of patient delving after the hidden reasons which had converted superstition and

empiricism and error into sound physiological knowledge based on irrefutable facts was just beginning. The study of pathological anatomy is almost wholly a product of this century. During its early part we find obstetrics rescued from the hands of ignorant midwives. The reflex action of the nervous system was demonstrated. Oscultation and percussion were developed as a means of exploring the internal organs. The ophthalmoscope, the microscope, the spectroscope, the sphygmograph, the hypodermic syringe and the clinical thermometer are all inventions of this one hundred years, each revolutionary in its own field. Materia medica and therapeutics have undergone most marvellous changes and finally we have those crowning achievements of the age, the discovery of anesthesia making surgical operations painless and the demonstration of the existence and life history of bacteria making aseptic surgery possible.

The last quarter of the century has been so full of discovery and achievements that it is useless to attempt their enumeration. Ross's wonderful researches on the cause of malaria followed so quickly by Reed's conquest of yellow fever will ever be epoch marking beacons, not only of medical science but of civilization itself, and finally comes that splendid final demonstration of the soundness and practicability of the results obtained by these men, the work of Gorgas in the canal zone.

The records of this early period of the Society show that in spite of the fact that these pioneer followers of Esculapius were so hard worked and poorly paid that they had few or no opportunities for scientific investigation and discovery, they were acute observers eager to take advantage of every opportunity which came their way and keenly receptive of new ideas. Their efforts to gain knowledge which would aid them in treating the sick is everywhere shown and their progressiveness and ingenuity is attested by the fact that numerous additions of lasting value in materia medica and surgery were introduced by Vermont doctors of this century. In all this effort at progress and betterment we find the Vermont Medical Society taking the active part. It was the clearing house for information and new ideas. In 1816 a note of inquiry was sent to all the county societies requesting a history of the symptoms together with the most successful method of treatment in the epidemic at that

time prevailing. Such a letter was again sent out in 1817, and similar letters time and time again after that date.

In 1818 a delegate was sent to confer with like delegates from New York, with an idea of forming a national pharmacopoeia, thus showing that the interests of these men were broader than their own state line. The conference was held in Northfield, Mass. Erastus Torrey and Selah Gridley attended, representing the society. Later Torrey horrified the society by presenting a bill of \$30 for expenses incurred by him on this trip. Inasmuch as there was but \$18.52 in the treasury and no immediate prospects of more, there seemed a good reason for the dismay which this charge caused. The matter was put over until 1821 and then disallowed and so far as the records show Dr. Torrey was out of pocket to that extent.

One of the chief duties of these early societies was that of fixing of standards of medical education and passing upon the qualifications of candidates for degrees. There were no medical colleges in the state when the society was founded, few in the country and medical education was largely obtained by association with some practitioner in his work. The physician of this time had a deep horror of quackery and in the act of incorporation they embodied the authority to regulate medical practice. The transactions of the first sixteen years contain much on standards of education and finally in 1825 we find these qualifications codified in a circular which was passed by the society. This shows so well the high standard which the profession was aiming to maintain that I am quoting it in full:

"The medical society of the State of Vermont considers with regret the scant requirements and professional acquisitions from candidates offering themselves for examinations for licenses to practice and also for degrees at the medical institutions of this state; and not only in this state but in the adjoining states. They experience an earnest concern on account of general laxness that prevails and that in fact less is now insisted on at some of the institutions for candidates to obtain the degree of M. D. than was formerly required to obtain the degree of M. B. We further consider this abatement of requirement as having a strong tendency to depreciate the reputation of the profession and prove ultimately injurious to the community—therefore this society

does establish the following ordinances to be observed by the several county societies in this state in granting their licenses to candidates who may apply for that purpose instead of applying to the medical institutions for degrees in Doctor in Medicine.

1. *Each and every student who may apply for the above purposes to any county society in the state instead of applying to the medical institutions for degrees after the first day of January, 1827, shall bring a certificate that his preparatory studies are sufficient to his being able to enter the freshman class in either of the colleges in this state; or submit to be examined to this effect unless he may have the degree of A. B.*

2. *If any candidate shall have the degree of A. B. he shall be required to have studied three full years with some licensed practitioner with an absence of not more than six weeks in each year. If such candidate has been fitted to enter college he shall have studied four years as above before he shall be admitted to an examination for a license.*

3. *Each candidate applying as above shall have attended at least two courses of medical lectures during his pupillage and shall have arrived at the age of twenty-one years and shall bring certificates of good moral character.*

4. *Certificates of study, of morals, etc., shall be made oath to before some competent civil officer unless given by some member of a legal medical society in this state.*

5. *Being fully impressed with a view of a necessity of a general reform this society with due reference do hereby recommend to the medical institutions in this state, also in the neighboring states, that candidates be furnished with degrees of bachelor instead of doctor of medicine after the above period of time and that the degrees of M. D. be conferred on those who may apply seven years after the degree of M. B. may have been granted.*

6. *This society hereby directs every secretary to correspond with the constituted several medical institutions and medical societies in the State of Vermont, New York, Connecticut, Massachusetts, Rhode Island, New Hampshire, and Maine, and respectfully request the propriety of their adopting simultaneously recommendations similar to the above for the benefit of the community and the reputation of the profession and they were further directed to accom-*

pany these ordinances with such explanations and arguments as the thing may seem to require.

7. *In case the above propositions shall be rejected by the constituted authorities of the several medical institutions and societies above, then these ordinances are to be rescinded and not to be obligatory on the medical society in this state but if adopted to be strictly observed."*

The need of medical schools for a broader training than was possible in the office of one physician was early recognized. But long after establishment of these institutions the society retained its right to grant diplomas and further acted as censor to these schools. The original corporation act of the University of Vermont included a school of medicine. In 1804 John Pomeroy was appointed lecturer in surgery and anatomy but no teaching was done under this appointment until 1809 when his appointment was changed to professor of medicine and surgery. From 1809 to 1822 medical students came to Dr. Pomeroy from different portions of the state to receive at his office and in his extensive practice, instruction in the science of medicine. The number of students became so great that he found it necessary to engage more commodious quarters than his office afforded, consequently a building on Water Street was secured and the first regular course upon anatomy and surgery ever given in Chittenden County was given to twelve students in the winter of 1814. From this time to 1821 Dr. Pomeroy was the medical school and gave practically all the instruction himself. In 1821 the organization of the medical department was further amplified by the additional appointments of Nathan Ryno Smith, M. D., Professor of Anatomy and Physiology; William Paddock, M. D., Professor of Materia Medica and Botany; Arthur Livermore Porter, M. D., Professor of Chemistry and Pharmacy. In 1823 the first class of fourteen members was graduated. In 1825 the largest, numbering fifteen, was graduated. In 1829 a building was erected on the south side of the College Green, where it now stands, for the sole use of the medical department. In 1836 only one medical student was graduated and the department was suspended after graduating in all one hundred and fourteen (114) students. Work in this department was not again taken up until 1853, when the school opened with Samuel White Thayer, Jr., Professor of Anatomy and Physiology; Horatio Nelson, M. D., Professor of

Surgery; Walter Carpenter, M. D., Professor of Materia Medica and Therapeutics; Orrin Smith, M. D., Professor of Obstetrics; Edward Cane, M. D., Professor of Theory and Practice of Medicine; Henry Erin, M. S., Professor of Chemistry and Pharmacy. Since this date the school has been constantly in operation with various reorganizations which changes in the requirements of education have demanded. The reason for the lack of students which caused the suspension of the school in the early days, is easy to explain. There had been established a medical school in conjunction with Dartmouth College in the eastern part of the state and two rival schools in Vermont, one at Castleton and one at Woodstock. With transportation such a problem as it was in the early days these schools naturally absorbed the prospective students in their vicinities. There seems to have been no close relationship between this department of the University and the State Medical Society, although its founder, Dr. Pomeroy, was very closely associated with the founding of the Vermont Medical Society. It was to him that the incorporation act left the matter of calling the first meeting of the new society. The records seem to show that the society sent its first delegate to assist in final examinations on the invitation of the university in 1853. In 1857 the society held its semi-annual meeting at the same time and in connection with the medical commencement of that year. The reports of the delegates were universally complimentary to the work of the school but in 1867 the delegate seems to have felt that he was treated with a lack of courtesy by the university faculty. In his report he excused them on the ground of rush of work rather than any intention to put a slight on the society or its delegate.

The Castleton Medical School was founded by an act of the legislature in 1818, which gave to Dr. Theodore Woodward and Selah Gridley and their associates, the charter of the Castleton Medical Academy, later changed to the Castleton Medical School, with power to confer those honors and degrees which are usually conferred by medical institutions. This school flourished for many years and during this period of existence, from 1818 to 1854, graduated fifteen hundred and forty-two students. At one time it had a loose connection with Middlebury College, that institution granting the degrees. Many of its graduates were highly successful in

the practice of medicine and widely known not only within the state but outside its borders. In its faculty, it numbered some of the brightest medical men of the state, among whom may be mentioned Dr. William Tully whose name is perpetuated by the Tully powder and who was the author of a book on *materia medica* which was the standard of its time, and Dr. Jonathan Allen to whom belongs the credit of first introducing *veratrum viride* as a therapeutic agent to the medical world. Delegates from the state society were sent to assist this school in its examination of students coming up for graduation for the first time in 1821. The reports of these delegates were always flattering to the school until 1860 when a delegate complained that the school was not following the standards for admission recommended by the society. The faculty at this time maintained a defiant attitude and informed the secretary that they were under no obligation to follow its standards so long as they were following those recommended by the American Medical Association. This is the first mention which we find in the society's records of any action on the part of the American Medical Association in reference to medical education and it seems to imply that at this time our own state society advocated a standard higher than that of the national association.

The Vermont Medical College of Woodstock owed its origin to the labors and efforts of Dr. Joseph A. Gallup, the first graduate of Dartmouth, Professor of *Materia Medica* in Castleton from 1820 to 1823. The school was formed in 1827, by Dr. Gallup who will be remembered as the man who was for eleven consecutive years president of this society. The institution was incorporated after several unsuccessful attempts in 1835. It had a troubled career. A schism arose in its faculty which resulted in 1834 in two faculties, each making an announcement of a course of education. This caused the facetious remark that Woodstock was the only city in the United States with the exception of Philadelphia that could boast of two medical schools. The institution finally lost support and no sessions were held after 1856. For a period of its existence, diplomas were issued to its graduates by Waterville, Me., College and later by Middlebury College. It had a strong faculty many of whom were later well known in the larger medical centers. Its founder, Dr. Gallup, was one of the best known men in Vermont and was the

author of several volumes including one on Vermont Epidemics which contains much valuable information. The Vermont Medical Society sent delegates to this school at its request for the first time in 1826 and for a number of years afterwards. The reports of these delegates were universally favorable to the course of teaching which was given in the school.

One of the chief difficulties which assailed these early medical institutions was the supply of anatomical material. The people of the community were inclined to suspect very strongly that their dead might rest none too securely in their graves while the schools were in session. The discussion which took place in the legislature while the Woodstock school charter was up for passage gives an interesting side-light on this sentiment. Mr. Bradford of Sunderland in reply to a discussion of the bill said he hoped that it would not pass "for although the gentleman last up had painted and varnished it up so far that it appeared like a whited sepulchre, yet he suspected that it was in fact full of *dead men's bones*. Mr. Ransom of Townshend proposed an amendment fixing the location of the said school at Brattleborough. The man from Chelsea favored this amendment as he wished the institution to be placed as far from him as possible and only regretted that the amendment did not designate Vernon which was still farther off. That this distrust at some times became acute and that the suspicions were at times well grounded, is attested in an account of the Hubbardton raid which I have copied from an article on the history of medicine prepared some years ago by Dr. C. S. Caverly of Rutland.

"The Hubbardton raid which occurred in 1830, was an episode in which the sturdy sons and fathers and husbands of Hubbardton, armed with weapons from the farm, marched in a body to the old college to rescue from its dissecting room the body of the wife of one of their number, whose new-made grave was found empty. Dr. J. M. Currier has given us an account of the event in lines after the style of 'Hiawatha' representing the bereft husband searching the precincts of the dissecting room for the remains; the gruesome tale proceeds:

He groped about among the tables,
Squinted here and there among the subjects,
And picked out one from certain marks
That he could call his wife under oath;
And was ready to pack it up and start

For the land of early rose potatoes,
When the Professor, larned and wise,
Told him that the subject was a burly negro,
And wore a number fourteen boot,
And never gathered spruce gum in the forests,
In the wildwoods of Hubbardton.'

After threats to burn the town if the body was not produced, and after further search, the headless corpse was finally discovered under the floor, and the head being produced, by way of compromise, these sturdy rustics marched back triumphantly with the mutilated remains."

So much feeling existed in Woodstock during the early days of this school owing to the unwarranted disinterments which had been practiced in the neighborhood, that the faculty "pledged themselves to the community not to use, nor suffer to be used, so far as might come to their knowledge, any human body that might be disinterred hereabouts. 'It may be invidious to set limits, but we are willing to say the State of Vermont.'" Furthermore, as a guarantee of their sincerity, a plan was adopted by the faculty to relieve the public mind on this point. A committee was appointed consisting of three persons entirely disconnected with the school, who were at all times to have access to the premises, and to whom the keys were to be delivered whenever demanded, and whose duty it would be to disclose any improper proceedings on the part of the faculty in this direction. This committee consisted of Hon. Henry C. Denison, Colonel Daniel Dana and Captain Charles Dana.

In 1852 a committee was appointed by this society to prepare legislative enactment legalizing the study of anatomy. In what way it intended that this be done the record fails to state, but presumably by giving to physicians and colleges a legal means of obtaining unclaimed bodies for anatomical purposes.

The society was active in getting laws relative to medical practice placed on the statute books. In 1823 a committee was appointed to ask the legislature to pass an act suppressing empiricism. After this the matter came up for discussion time and time again, but we find no law appearing on the statute books until the 80's. Another matter which was frequently brought up was a schedule of fees, and we find as many as six such schedules recorded at various times in the society's books. The question of the obligation of members to abide by the fees so

passed was also discussed and it seems to have been the sense of the society that the individuals were in no manner obligated to follow absolutely this schedule but were urged to do so within reason. The prices of work during all this period between the first schedule and the last schedule have increased less than fifty per cent.

As we follow the record down, we find early a growing interest in the study of disease in reference to its prevention. In 1851 the society passed a resolution and appointed a committee to draw up a law for the reporting of vital statistics. Much earlier than this, some attempt had been made to gather these by sending out lists of inquiry to the county societies, but this seems to have been the first time that the matter was taken up earnestly with the idea of getting a law passed. In 1857 the matter was presented in a paper by Dr. H. H. Niles (of Post Mills) on the "Relation of the Physician to the People." In this year a registration law was passed. In 1858 Dr. Allen of Middlebury presented an address on "The Relation of Vital Statistics to Preventive Medicine," which contains passages so well expressed that I think they should be quoted. "Nothing is so intimately connected with the happiness of a people as the degree of their public health and consequent upon this the average of human life. Is it possible for a man to be at ease while living where he knows that the deaths are so frequent, that one-twentieth part of the whole population must die annually, as in New Orleans, when at the same time he knows that in other places less than the fiftieth part are swept away, as in Massachusetts? Can he be happy, although himself well, if during each year every fourth individual around him is prostrated by disease, while in other regions less than the twentieth part are annually sick?"

"It is a matter of great moment to the whole population collectively that they may take measures to remove the cause of disease, and to prevent the operation of those agencies which engender disease. To each individual this is a subject of greatest interest, that he may select his place of residence or if that is fixed, that he may so control, regulate or guard against the circumstances as to extinguish or ameliorate the existing evils. But how shall this knowledge be obtained? How can all the occult and mysterious agencies which are in continual operation to produce the 'thousand ills that flesh is heir to' be revealed and rendered plain?"

"Fortunately we are not left without the means by which this information may be obtained. The causes of disease are within and around us—in our own bodies, in the earth, water, and air, upon, by, and in which we live. It is surprising how plain and simple become these causes, when viewed by the light of true inductive science causes hitherto considered so occult, so wonderfully mysterious. Diseases, heretofore supposed to be in some way connected with inscrutable dispensations of Divine Providence, are found to be but the inevitable consequences of our own ignorance or misconduct." "The first and most important step is to determine in what localities each disease is most rife and most fatal. In what places intermittents are most common, in what continued fevers, where dysenteries prevail, where pneumonias and bronchial affections are found."

In 1859 the society passed the following resolution:

"It is recommended that every town in the state be required to provide means for the periodical vaccination of the inhabitants.

The smallpox is a terrific disease, but is almost entirely shorn of its terrors by the preventive remedy of vaccination. If a person is not vaccinated, there is more than two chances to one that, if exposed, he will take the disease; but if properly vaccinated, there is scarcely one chance in five hundred. Hence the importance of this preventive measure, and the guilt of neglecting it. Under existing circumstances, it becomes the special duty of every person to protect himself against this disease. Anyone who permits himself to be sick with it, is as justly chargeable with ignorance, negligence or guilt, as he who leaves his house open to be entered and pillaged by robbers known to be in the neighborhood. And upon that state or town which does not interpose its legal authority to exterminate the disease, should rest the responsibility as must rest the consequences, of permitting the destruction of the health and the lives of its citizens."

The fact that these same arguments are needed now as much as then and that they have failed in all these years to result in compulsory vaccination is not flattering to the progressiveness and good sense of our people. In 1860 we find registered a protest against carelessness of physicians in reporting their deaths in response to the recently passed registration law showing that

human nature ever remains the same and that however firmly we believe things as generalities, we are all apt to fail to apply them in detail to our own individual cases, especially if they involve some degree of trouble and annoyance.

In 1865 the society called the attention of the legislature to the perils of a cholera epidemic and expressed willingness to aid in the enforcement of any restriction law which they might deem it wise to pass. In 1864 we find the name of Dr. Henry D. Holton among the list of those voted into the society and the next year that of Dr. M. H. Eddy of Middlebury. In 1872 Dr. Holton in his address as president urged upon the society the desirability of establishing a state board of health, thus showing how early in his medical career he became interested in matters of public health. In 1873 the society appointed a committee to urge the matter before the legislature. This committee consisting of Drs. L. C. Butler, H. D. Holton and S. Putnam, issued a circular presumably for use among the members of the legislature in which they called attention to the fact that more than half the deaths in Vermont were from preventable disease and their belief that the establishment of a state board of health would prevent a large part of this mortality. The circular ends thus, "We ask your favorable consideration for the measure assured that in no better or more speedily remunerative way can the state appropriate a portion of the people's money or more certainly fulfill its high mission than in protecting its communities, old and young, from the approach or prevalence of contagious and infectious disease." The movement thus instituted resulted in the establishment of a state board of health in 1886.

Since then legislative action on these matters has been frequent and you are all more or less familiar with the gratifying results in the diminution of preventable disease which has taken place largely through the efforts of this department.

The medical writings of a century ago still show the tendency of the mind to fix itself upon the validity of dialectics. To look rather to agility and sureness of logic than to genesis and verification. While in modern times, we have set our minds rather toward investigation of premises or origins somewhat it may be feared to the detriment of our logic. Facts are now preferred to argument and we require from those investigators who proclaim the discovery

of facts a minute demonstration of their methods and do not allow any agility of verbal fence to put us off this crying demand. Thus, we find in Gallup's "epidemics" passages which, while seeming to indicate that he is just on the verge of the true theory of the cause of the communicable diseases, which, as he says, have hitherto "eluded the most elaborate researches and microscopical observations," merge off into pages of argument on the effect of heavenly bodies, especially comets, arguments based upon vague premises and couched in obscure terms. In summing up this line of reasoning, he says "it is chiefly to be insisted that change has taken place constituting what is termed a pestilential state of the atmosphere and that this state is brought about by changes in the conjunction and opposition of planets, through the medium of that permanently elastic and non-gravitating fluid, electricity. Gallup seems to feel that his arguments have flown a little high as he remarks that it might be expected that they ought to be connected with "more evidence to substantiate them." "It will be observed in general terms," he remarks, as proof of these observations, "first that a great part of the hypotheses are strictly consonant to fill philosophical principles, supported by the authority of the greatest adepts in science." He tries to pin these planetary influences to pathological conditions in man in the following ways "and here it must be understood that the foregoing assignable planetary influences only serve to augment the power of these occult qualities, or pestilential conditions and furthermore that this given state or pestilential condition of the air, would seldom if ever produce disease in man unconnected with numerous local or conjoint causes, and that these general and local causes exert their hurtful operations on the bodies of mankind when brought into action by some exciting cause." The knowledge of the pathology of febrile diseases is as vague as their idea of the etiology. Gallup's views of the pathology of these epidemic diseases which he remarks are warranted by symptoms and dissection, were in his own words "that there is a retrogression of action and circulation from the surface of the body, extremities, etc., an accumulation of fluid in the internal and more essential parts with inordinate vascular action." Upon this pathological basis the men of that day based their treatment of all

the "sthenic" or inflammatory (febrile diseases) including typhoid and yellow fever, pneumonia, measles, scarlet fever, and even tuberculosis. This treatment consisted largely in blood letting, during which process an average of twenty or thirty ounces of blood was taken and in some cases much larger quantities. Rush remarks that a physician in prescribing for a patient in fever should forget the natural strength of his muscles and accommodate the loss of blood to the morbid strength of disease. He attributes all failures to too great timidity on the part of the physician in drawing enough blood and to fortify his opinion, he mentions five cases from whom quantities varying from one hundred and three to one hundred and seventy-six ounces of blood were drawn during an attack of yellow fever with successful recovery. Most of the leading practitioners of that day seem to have followed this treatment, and we find it recommended by Stewart of Philadelphia, Gallup, Gridley and many other prominent physicians of the period around the beginning of the century. That there was beginning a revolution against this method is indicated by the amount of space which these writers devote to arguments in support of their views. In some places Rush becomes almost peevish in his intolerance of "those squeamish physicians" who do not believe in depletion. As an adjunct to blood letting, they gave calomel in large doses. Rush advises four doses of twenty grains per day and states that some successful practitioners have accentuated the usual method of introducing mercury by obliging the patient to wear socks filled with mercurial ointment! Dr. Stewart reports a case (female) who took 356 grains of calomel in six days with no ill effect. The salivation they looked upon as one of the desirable effects to be sought "as the drug," says Rush, "does no service until it salivates." Added to these depletives, they gave emetics of which tartar emetic seems to have been the favorite. Another common method of making these patients miserable was by the use of blisters which they applied with great diligence. After the fever had been "driven out" of the patients by these means, they recommended a tonic treatment which they state should be used with great care "as the fever was apt to leave the patient in a great state of weakness." The favorite tonic was quassia together with light wines. This method of treatment had its

advocates among the older practitioners of the times for many years but was gradually replaced by less vigorous measures and early in the century we find that the cold bath and the cold water treatment of fevers was advocated for a few years. *Veratrum viride* which had a great rage in the treatment of pneumonia about 1859 when it was introduced by Dr. Allen was used not only in this disease but in cases of diphtheria and rheumatism.

No better refutation of the oft-heard criticism of therapeutics that it has not advanced as it should can be had than by a perusal of any of the medical literature of a hundred years ago.

I would like to take the time to give a biographical sketch of some of these great men of Vermont's medical history, men whose greatness was not limited to the practice of their profession but who have been leaders in the political and civic life of their communities and state but the already great length of this paper renders that impossible.

I cannot refrain in closing, however, from looking for a moment into the future and wondering if those who celebrate the bicentennial of this society will be able to point to achievements as great in the next hundred years. We may feel sure that much of the work upon which our present views are based is irrefutable and will stand the test of time. Upon this greatly enlarged foundation much remains yet to be built. We believe that we can confidently predict that ere another hundred years have passed, many of those puzzling questions of the present, will have been as conclusively settled as has the cause of malaria and tuberculosis. No one can doubt that the entire life history of the recently discovered virus of infantile paralysis is just on the verge of being cleared up; the cause of measles, scarlet fever and rabies will probably be demonstrated, and are we too sanguine in believing that cancer that greatest of the unexplained scourges of modern life will be shed of much of its terrors by a knowledge of its cause and consequently of means of prevention? Vaccine and serum therapy are yet in their infancy and we can confidently predict that large advances in these lines will be made, possibly to the extent of elaborating a cure for tuberculosis and malignancy which will mean as much to the sufferers from those diseases as does antitoxin to the diphtheria victim.

ACUTE INFLAMMATION OF THE MIDDLE EAR.*

BY

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In presenting this paper upon acute inflammation of the middle ear I wish to particularly emphasize the necessity for an early and accurate diagnosis of these affections by the general practitioner. We are doing everything to cure the complications which follow these diseases but practically nothing to cure them in the acute stage. This is the period in which most of the cases are seen by the general practitioner and upon his good judgment and ability to properly diagnose and treat the case, will depend the future comfort, and even life of the patient. In all that pertains to the causation, symptoms and pathology of diseases of the middle ear, the Eustachian tube must be considered as forming an important part of the middle ear, as must also the mastoid antrum and mastoid cells. With this conception of the middle ear, the rather considerable extent of mucous membrane beginning of the nasopharyngeal orifice of the Eustachian tube and ending in the mastoid cells at the tip of the mastoid process, will be better realized, and the causation, pathology and treatment of the several affections of the labyrinth of cavities comprising the conducting portion of the hearing apparatus be better understood. In order to properly diagnose acute diseases of the middle ear, the physician must be able to recognize the appearance of the drum membrane in health as well as in disease and be able to locate certain typical landmarks. Of these the color of the membrane, the presence of the short and long processes of the malleus, the position of the anterior and the posterior folds, the umbo, and the light reflex are the most important.

Since the membrana tympani separates the external from the middle ear and its inner surface of mucous membrane forms a portion of the tympanic cavity, while its outer surface or dermoid layer is a continuation of the skin of the external meatus, it is apparent that the ear drum may be affected by diseases involving either the middle ear or the external auditory meatus.

*Prepared for and read before Washington County Medical Society.

The drum membrane may however be affected independently of any disease of the neighboring tissues, and it is evident that when this is the case the affection cannot be properly classified with diseases of either the external or the middle ear.

ACUTE MYRINGITIS.

Acute myringitis or inflammation of the ear drum occurs as the result of localized infection of the drum head from traumatism and local irritants, impact of cold water from sea bathing or douching, and foreign bodies.

Symptoms.—The patient complains of an ear-ache which may be severe or quite mild, tinnitus aurium, and of a full and stuffy feeling on the affected side of the head. There is little complaint of loss of hearing, indeed it is upon this point that the diagnosis can best be made, for in any case in which there is pain in the ear, tinnitus, and fullness in the head, and in which the drum membrane shows signs of active inflammation, if the hearing is but slightly impaired, the conclusion should be that only an inflammation of the drum membrane is present, while if more pronounced deafness is present the same is evidence of an involvement of the cavum tympani.

Treatment.—When seen at the outset palliative measures may at once be instituted. If the pain is severe codein, grains $\frac{1}{4}$ or $\frac{1}{2}$, repeated every two to four hours if necessary. Dry heat applied locally to the ear is usually very grateful to the patient. A pledget of cotton of proper size to fit the meatus snugly, if dipped in a 5% solution of phenol and glycerine and applied to the drum membrane as hot as can be borne, is of a good deal of assistance in relieving both the pain and the feeling of fullness in the ear. As soon as the acute symptoms begin to subside the patient may be permitted to go about his daily duties. When the inflammatory process is sufficiently severe to produce blebs, they should be incised, care being taken that the incision penetrate only the dermal layer of the drum inasmuch as deeper incision would permit infection to enter the tympanic cavity. Any resultant tinnitus or slight deafness will usually yield to moderate inflation which may be inaugurated after the acute symptoms have subsided.

According to Phillips, the most satisfactory classification of middle ear diseases is obtained by adopting a pathological basis, dividing the

diseases into those that are bacterial in origin and those that are not. The nonbacterial are known as catarrhal and those of bacterial origin as simple inflammations. The latter are a result of invasion of microorganisms. The former or catarrhal are due to the mechanical effects produced by the closure of the Eustachian tube.

ACUTE CATARRHAL OTITIS MEDIA OR ACUTE MIDDLE EAR CATARRH.

Catarrhal affections of the Eustachian tube and middle ear are of frequent occurrence particularly during the cold and changeable seasons of the year and in damp climates. This disease is, as the name indicates, an actual inflammation of the mucous lining of the tympanic cavity. The mucous membrane of the tube becomes reddened and swollen, the tube lumen narrowed or closed. The result of this closure of the lumen of the Eustachian tube is a retraction of the drum membrane, a very common clinical observation. According to Boeninghaus the mucous membrane of the middle ear seems to have the property of absorbing the air contained in the middle ear spaces. With the lumen of the tube closed by catarrhal swellings this faculty of air absorption in the middle ear, causes a negative pressure in the middle ear spaces, and the air pressure in the external auditorial canal forces the drum inward toward the promontory in an effort to establish compensation. The tendency to vacuum formation continuing, a hyperemia of the mucous membrane results from which a transudate finally flows into the tympanic cavity.

Causation.—Cold in the head, nasopharyngitis, and indeed the presence of all varieties of inflammation or new growths in the nasal or pharyngeal space, may be considered as predisposing causes. Ropy secretion requiring the individual to blow his nose with undue force in order to clear the nares is often great enough to blow some of the infected mucus through the Eustachian tube into the middle ear, the result of which is that catarrhal otitis media is at once set up. The milder forms of measles, scarlet fever, la grippe, etc., which nearly always affect the throat at the same time, are also frequent causes, the more violent varieties of the infectious diseases being usually followed by acute purulent otitis media. Adenoids are a very frequent cause and it is entirely probable that it is in this particular ailment that adenoids

prove most harmful to the individual, occurring as they so frequently do in children, the causative relation between the adenoids and the accompanying deafness is not suspected early, and is not dealt with until structural changes within the ear of an incurable nature have already been established.

Symptoms.—Deep seated pain in the ear is the earliest as well as the most pronounced symptom. The pain is sometimes severe but rarely so severe as in acute purulent otitis media. Patients are prone to point to the region of the tonsil as the seat of pain, probably on account of the involvement of the Eustachian tube.

In childhood the disease is often overlooked and many times neglected, and it is only after the lapse of time, as the loss of hearing becomes gradually apparent to the parents or teachers, that the condition is brought under observation, and by this time it has often progressed into one of the chronic catarrhal forms. While deafness is a characteristic symptom it varies widely in different cases. Adults complain of fullness in the affected ear and pressure within the head, usually combined with tinnitus. During the exudative stage, the movement of the fluid within the tympanic cavity causes variations in the hearing function, the hearing being worse when the patient is in a recumbent position. The temperature is normal or slightly elevated in uncomplicated cases occurring in adults. Otologists differ as to the likelihood of rupture of the drum in these cases. But only marked bulging of the drum membrane is an indication for free incision and drainage. In many cases there is but slight redness of the drum and the landmarks are visible. The drum is not bulging and is oftentimes retracted. Indeed this retraction, and the prominence of the bony landmarks are characteristic of the disease.

Prognosis.—Prognosis is favorable whenever each attack is promptly relieved by appropriate treatment, but delaying treatment, or indifference as to the serious effects which are produced by repeated attacks, often result in the chronic form of the disease, with organization of the exudate, retraction of the ear drum, ankylosis of the ossicles, and consequent impairment or complete loss of hearing, with or without tinnitus.

Treatment.—The first indication is the relief of pain. Although opium or morphine in some form may be permissible if the pain is very

severe, I believe the plan to be unwise, and that it should not be used except in rare instances. Dry heat applied to the ear is of a good deal of service. Several drops of phenol and glycerine (5%) placed in the ear as hot as can be borne aids very materially in relieving pain and seems to have a favorable effect upon the inflamed tissues. I sometimes alternate between the phenol and glycerine solution and a solution of borated alcohol, 20 grains to the ounce, using this as hot as can be borne, beginning with a 25% solution in water, and as the ear becomes tolerant of its use increasing it to full strength. The aural bougie recommended by Dr. Richards of Fall River, is of much service in relieving the pain. Ballinger recommends a mixture of equal parts of carbolic acid, glycerine and the hydrochlorate of cocaine, this mixture to be heated and a few drops placed in the ear. A solution of alcohol may follow this to counteract the effect of the carbolic.

The ear drum should be carefully observed throughout the disease, and any well marked bulging is an indication for free incision and drainage. It should be borne in mind that a certain amount of relaxation of the drum membrane follows an inflammation of this character, and this together with the remaining exudate may result in the formation of adhesions unless certain measures are instituted to prevent it. For this reason ventilation of the Eustachian tube and tympanic cavity is important. After the acute symptoms have subsided, inflation of the middle ear should be practiced, at first daily, and subsequently at longer intervals, until all symptoms of congestion disappear and the membrane retains its normal position. Of the approved methods of tubal inflation, the catheter is the most effective, and should be used in all cases except children. An application of a 2 to 4% solution of cocaine along the floor of the nares and about the orifice of the tube serves the double purpose of reducing the swelling of the soft tissues, and facilitating the introduction of the catheter, as well as increasing the comfort and confidence of the patient. A simple air douche may be employed or a vapor from an alcoholic solution of menthol, 60 grains to the ounce, will hasten the absorption of the residual fluid, the vapor being conveyed to the middle ear through the Eustachian catheter. Massage of the drum with the Seigel otoscope is of

service, especially as the drum may be watched during the procedure and the location and extent of adhesion observed.

The surgical correction of abnormalities and deformities of the nose, and the removal of adventitious tissues, whether hypertrophied turbinates, polypi, adenoids or hypertrophied tonsils, is important in preventing recurrence of the disease.

ACUTE PURULENT OTITIS MEDIA.

This disease is characterized by symptoms which are altogether more severe in every way than those of the other middle ear affections, which have just been described. The inflammation is not only more violent, but the corresponding destruction of tissues within the middle ear is much greater. Bacterial invasion of the middle ear spaces takes place with the production of a purulent exudate. This gradually accumulates until it completely fills the tympanum, bulging of the ear drum ensues, and later if not relieved by a paracentesis spontaneous rupture of the drum head occurs. If the disease progresses it spreads by contiguity into the mastoid antrum and finally involves the mastoid cells, causing an acute mastoiditis.

It is now generally conceded that the micro-organisms almost invariably find their way into the tympanic spaces through the Eustachian tube. The character of the invading organism, and its virulence, and the variations in the resisting power of the individual are potent factors in determining the course and termination of the attack.

The predisposing factors in the causation of acute purulent otitis media are all of those enumerated in describing acute catarrhal otitis media, the chief difference between the latter and the one under consideration being in the violence of the causative disease. Hence acute suppurative otitis media is comparatively rare as a complication of the milder inflammatory affections of the throat, or of the acute infectious diseases, whereas it is quite common as a sequence of these affections when occurring in a severe form. According to Barnhill and Wales, the affections of this class which are most clearly responsible for aural complications in the order of their frequency are scarlatina, measles, epidemic influenza and diphtheria.

Symptoms.—The onset of acute suppurative otitis media is usually sudden, following a cold

or an attack of grippe, or as a complication of one of the exanthemata. The most significant symptom is the excruciating pain which persists without cessation until relieved by rupture of the drum membrane. The pain is not intermittent in character, although often less in the morning than at night. The temperature is nearly always elevated and may reach 103 degrees or even more. After the continuation of the pain and fever for from one to three days, the drum membrane ruptures, and a discharge of yellowish pus appears at the external auditory meatus. After perforation takes place the pain completely or nearly subsides, and the patient falls into the first sleep he has enjoyed since the onset of the pain. However, if the perforation is inadequate to provide drainage or if it is badly located for this purpose, the pain quickly returns and the suffering becomes almost if not quite as bad as before. Severe pain with intense redness and bulging of the ear drum are the characteristic early symptoms. If the external ear is filled with pus which pulsates, the diagnosis of acute otitis media can be made even though the ear drum cannot be seen.

Prognosis.—The termination depends much upon the violence of the attack, and upon the promptness and efficiency of the treatment. The outcome is influenced unfavorably whenever serious complications develop, and especially so in strumous, cachectic, tuberculous or syphilitic subjects. When death takes place it usually does so from some intracranial complication. In the very violent cases the best directed treatment, even at the outset, will often be insufficient to prevent great loss of tissue and consequently a much impaired hearing.

Treatment.—The treatment may well be divided into two stages, viz.: treatment prior to the establishment of pus and treatment after the establishment of pus. At the commencement of an attack, place the patient in bed and regulate the diet. A brisk cathartic relieves congestion and produces a favorable effect upon the inflammation. The remedies suggested for the relief of pain in acute catarrhal otitis media may appropriately be tried in the early stage of acute purulent otitis media. In addition to these some otologists recommend douching the external auditory canal with hot water, a douche bag being used for the purpose. The exudative stage of the disease as evidenced by a bulging ear drum, is an indication for surgical interfer-

ence in the form of an incision of the drum membrane. Let it be a large incision aimed at the most dependent or sagging portion of the drum. The direction of the incision being downward and outward and carried to the bottom of the drum. A clean cut incision of the drum membrane immediately relieves the pressure, establishes drainage, and the subsequent healing of the wound takes place with but little damage and no scar tissue. Nature's opening is usually a small jagged hole, often poorly placed for drainage, and is prone to result in scars and new connective tissue. The incision of an inflamed drum membrane is extremely painful. An ideal anesthetic for this operation is nitrous oxide Gas. A local anesthetic which renders the operation comparatively painless in adults, is equal parts of cocaine, menthol and carbolic acid, a few drops being placed in the ear in contact with the drum membrane, waiting 20 minutes before making the incision. After the operation the ear can be wiped with alcohol to neutralize the carbolic. Cleanliness and free drainage is the keynote of the after treatment. This can be accomplished by irrigating the canal with normal salt or boric acid solution, a Fowler suction douche which provides for drainage with suction being useful for this purpose, or a small wick of gauze may be packed loosely in the canal with the distal end in contact with the drum. This is to be removed, the ear irrigated, and the wick replaced as often as it becomes saturated with pus. Don't inflate the ear during an acute attack of acute purulent otitis media. This is indicated two weeks after an attack. Don't blow powder into the ear. Don't use oil in the ear. Don't use anything in the ear except a hot sterile douche, with or without a gauze wick to assure proper drainage.

CONCLUSIONS.

1. That an early and accurate diagnosis is essential in acute middle ear diseases.
2. That attacks of acute catarrhal otitis media are prone to recur or pass into the chronic form of the disease with permanent retraction of the drum membrane, ankylosis of the ossicles, with consequent impairment or loss of hearing.
3. In acute purulent otitis media, free incision of the drum is indicated to evacuate the pus. It relieves the pain, limits the extent of

the infection, shortens the course of the disease, and prevents complications.

APPENDICITIS.

BY

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This somewhat ancient pathological proverb is now perhaps a little beyond the general considerations of the more common surgical ailments, yet none the less interesting and certainly all the more scientific because of its frequency and thereby wide field of variation. From the active days of Sir Frederick Treves and Willard Parker, up to the present moment, this pathological condition has been agitated from numerous view-points of the experiences of operators all over the world. It is not from any idea of originality that I present this paper, but rather to quote a few well-defined and outlined cases which we have operated upon during the past eight months. As has been stated by W. J. Mayo, the liability of the appendix to disease is simply an example of a defect from progressive loss of function, just the same as we get early decay of the wisdom teeth, and the formation of corns and callosities upon the little toes. When it be taken into consideration that digestion, absorption and assimilation are the primary functions of the body, and that these functions must take place in an alkaline medium in the intestines, anything varying from this must be pathological. The degree of the pathological change may vary from merely a minute upset, transient in character, to one extreme in degree, lengthy in its course and of a variable limit of injury as its result. Take into consideration the normal position of the appendix as it hangs from the large oval end or true beginning or head of the large intestine, namely the cecum. Here it is, under normal conditions, allowed to wave or float hither and thither, governed or limited by its fan-like attachment, the meso-appendix, and promoted in its excursions by the peristaltic motions of the gut, accompanied by their segmentary musculature. Here also must be taken into account the apron-

like cover, or rebounding board, the omentum. All these controllers give the appendix free access in its own home, the roomy concave iliac fossa, paved as it is with strong, well-padded muscles, forming a perfectly tucked and quilted aperture within which our little friend can live, to go through its natural retrogressive steps after the twelfth or fifteenth year. This would seem to provide the appendix with ample barracks within which to fortify itself and live a healthful life, but again with a truly normal appendix it can be abnormal so far as position is concerned, namely:

(a) Lying with its tip pointing towards the spleen, being behind the termination of the ileum.

(b) Hanging over the brim of the pelvis.

(c) Lying in the iliac fossa, with its end near Poupart's ligament.

(d) Along the outer side of the ascending colon.

(e) Behind the cecum and ascending colon in the retrolic fossa.

(f) In apposition with the gall-bladder, tubes, ovaries or opposite iliac fossa.

All manner of variations could be enumerated, and yet we must duly consider all of these as partially normal if the appendix itself is unaffected, because extrinsic rather than self-imposed intrinsic forces have placed it thus. Besides these partially abnormal or varied normal extrinsic physical forces, including all closely allied muscular movements, we must think of the extrinsic and intrinsic pathological avenues of infection, namely the tubes, ovaries, uterus, pancreas, spleen, gall-bladder, alimentary tract, and psoas alley. Perhaps the appendix is exposed to more ways and means of trouble than any other part of our anatomy, and from these various sources come as many definite bacteriological growths. The bacillus coli communis of Escherich leads the invading army, closely followed by the streptococcus, staphylococcus, typhoid bacillus, gonococcus, tubercle bacillus, etc. The appendix may primarily be the seat of its own ailment and an initial factor as, for instance, in the case of colon bacillus, streptococcus, staphylococcus or tubercle bacillus, yet by its own faults pass on the trouble and again have it returned with compound interest, as in the case of tubercular peritonitis, and other conditions. Its own

pad-like protection, as previously shown, which normally acts as a friend, now becomes an enemy for time enough to convey the trouble further on and return it again with compound interest. Here again it takes the peace seat and protects against further trouble as by the well-known action of the omentum, peritoneum, etc., with their adhesive walls. I shall take the liberty to make four classifications of this disease, considering that all others are merely derivatives or sequelae of one or the other of these classes. Classification:

1. Acute appendicitis.
2. Ischemic, segmently constricted appendicitis with or without enteroliths (commonly called sub-acute).
3. Chronic appendicitis.
4. Appendicitis with abscess formation.

ACUTE APPENDICITIS.

CASE REPORT.—Master C., age 12, student. Family history: unimportant. Past history: negative. Present illness: was in school the day of the attack, which began by acute abdominal pain, followed by vomiting, rapid pulse, temperature 103 degrees. Examination showed an apprehensive abdomen, tenderness, and slight rigidity. Child somewhat restless. This was Feb. 13, 1908, about 5 p. m. Seen the next morning, when right rectus was found to be quite rigid, temperature 104 degrees, pulse 100, vomiting had continued by spells during the night, vomitus not unusual in character. Necessity of operation explained and advised, but refused by parents. Seen again in the afternoon, temperature 104 degrees, pulse 120, continued vomiting, increased abdominal pain and marked rigidity of right rectus, some distension. Parents consented to operation. Patient removed to hospital and operation performed at 8 p. m., Feb. 14, 1908. The appendix was found to be very large, black and gangrenous throughout middle two-thirds, and had evidently just perforated. The appendix was removed, the surrounding parts cleansed with swabs, and a small cigarette drain placed just through peritoneum. Temperature and pulse returned to normal in twenty-four hours. Vomiting ceased. Drainage removed on the fourth day. Wound healed perfectly. Uneventful convalescence and patient left the hospital March 6th, 1908.

ISCHEMIC, SEGMENTLY CONSTRICTED APPENDICITIS, WITH OR WITHOUT ENTEROLITHS (COMMONLY CALLED SUB-ACUTE).

CASE REPORT.—Miss D., age 19, mill operator. Family history: unimportant. Past history: has had spells similar to the present one, ever since nine years of age. Present illness: past five weeks, severe pain in back, low down, sharp and piercing, radiating from one side to the other. Pain in back and epigastrium very severe after eating and drinking; duration variable; character of food or drink makes no difference in result. Has sour eructations. Says she has vomited blood. Nausea has always been present off and on. Has not menstruated for five weeks; is irregular at times, no pain and otherwise normal. Bowels constipated. Appetite good but digestion painful. Sleeps poorly. Micturition normal. Examination showed a generally apprehensive abdomen, with some tenderness in epigastrium. No tumors. Some muscular spasm in region of epigastrium. Treated in general way for two weeks, when consultation was advised and consent given. Called in Dr. Gleason, and we found signs as previously described with addition of a localized well-marked tenderness and muscular spasm at McBurney's point. Temperature and pulse normal. Operation was advised for removal of appendix and patient entered hospital Dec. 14, 1908. Operation, Dec. 15, 1908. Removed an appendix characteristic of this type. It was of average size, segmented in two places in the middle third, the resulting constriction having curved the appendix into a figure S. It was pale and anemic, having sometime previously given up its resisting power. The meso-appendix was markedly thickened by its inflammatory attempt to give aid and re-establish proper blood supply, but in the latter it had failed in part, while in the former it had acted well. Post-operative dissection of the appendix showed two well-formed enteroliths within its lumen, each just beyond the segmental points. Between the concretions the mucous membrane was covered with the usual feculent, slimy exudate. The wall was nearly normal in thickness, but the tissue tougher than usual. The specific organism causing infection was not determined.

CHRONIC APPENDICITIS.

CASE REPORT.—Miss W., age 23, variable occupation. Family history: unimportant. Past

history: negative. Present illness: past month metrorrhagia, hemorrhage being quite free. Severe pain in right side low down. Had been resting at home most of this time. Pain persistent, gnawing in type with exacerbations, piercing in character. Leukorrhea. No vomiting or eructations. Digestion good. Bowels constipated. Appetite poor. Sleeps fairly well. Micturition painful and urine dark in color. Urinalysis negative. Gynecological examination showed tears in vaginal floor and cervix uteri, uterine discharge. Bimanually there was evident involvement of right ovary and tube, also appendix. Temperature and pulse normal. Advised operation for curettage, repair of lacerations, removal of tube, ovary and appendix. The patient consented and entered the hospital November 21, 1908. Menstruation began, although unlooked for, on the next day. The operation was delayed until Nov. 27th, 1908. Curettage, colpoperineorrhaphy and trachelorrhaphy was performed. Laparotomy revealed a very much enlarged and chronically inflamed appendix curled upon itself and firmly adherent to the right broad ligament. The right ovary was about the size of a small goose-egg and embedded in the right pelvic fossa entirely covered by adhesions. The right tube was much congested, thickened and inflamed, but less adherent than the ovary and appendix. Appendectomy, salpingectomy and oophorectomy was performed, after considerable difficulty in shelling out the ovary. This was accompanied by considerable hemorrhage. The left ovary and tube were normal and not disturbed. Post-operative examination of the appendix revealed the same to be very much enlarged, curled upon itself as a horseshoe, larger than the middle finger, wall greatly thickened and much discolored, nearing the point of gangrene. The lumen was entirely obliterated, no enteroliths, collateral circulation well cut off.

APPENDICITIS WITH ABSCESS FORMATION.

CASE REPORT.—Miss G., age 14, student. Family history: negative. Past history: attack similar to present one two years ago diagnosed as indigestion. Present illness: sudden onset of vomiting, epigastric pain, tenderness over entire right abdomen. These signs and symptoms persisted for two days before the family physician, the late Dr. Stark, was called, January 29, 1908, the third day Dr. Gleason was called in consultation.

At that time temperature was 105.5 degrees. pulse 130, moderate distention, rigidity and dullness in appendix region. Operation was advised and refused by parents. During the days following, vomiting persisted and progressive weakness was very apparent; little or no nourishment was retained. One week later, Feb. 6, 1908, the parents consented to operation and the patient entered hospital. At this time the patient was emaciated and anemic; there was a distinct mass felt in right iliac region about the size of grape fruit, very tender and dull to percussion. The patient was hurriedly prepared and an incision made in the usual manner. The deep muscles were found to be infiltrated and peritoneum much thickened. So soon as the peritoneum was opened a large quantity of foul-smelling pus was evacuated. The abscess was found to be adherent to the parietal peritoneum and the abdominal wall. The opening was enlarged to permit of free drainage, but the appendix was not removed. The cavity was swabbed and ample cigarette drainage introduced. When the patient was removed from the operating table the pulse was 140. She made a slow but steady recovery and remained in the hospital six weeks. After returning to her home, there was continued pain in the appendix region, no temperature or abnormal pulse. It was explained that so soon as her strength returned the appendix should be removed. On April 2, 1908, she reentered the hospital, and the next day a secondary operation was performed and the appendix removed. There was a large mass of adhesions on the outside of the cecum, which embedded the appendix, the latter being of the cicatrized type, very pale in color, lumen obliterated, and no concretions. Convalescence was perfect.

CONCLUSION AND SUMMARY.

As will be noted herein no attempt has been made to describe any one or more special operations for these or other cases, or to define our post-operative methods, these two points being conspicuous by their absence. On the other hand, it is my desire to bring forward the methods we use in obtaining definite histories of all cases, leaving out all superfluous questions with answers, and only recording those which have particular stress upon the ailment. Therefore we always aim, so far as it is possible, to

make a narrow and closely classified diagnosis before operation. Also we try to show the corroboration of the diagnosis by closely picturing the result of post-operative dissection of the part at fault in its changes in gross pathology and anatomy. During my recent visit to the Mayo clinic at Rochester, Minn., and the clinics of others in Chicago, as, for example, Murphy and Bevin, many of these typical appendix cases were seen, all being well defined and in their own class.

967 Elm St.

WHY NOT READ ON A TRAIN?

Many people believe that it is injurious to the eyes to read on a train, but few seem to know why. The reason is the added strain on the delicate muscles of the eyes. The motion of the train shakes the paper or book constantly, thus continually changing its position and its distance from the eyes, keeping the delicate muscles of the eyes in constant action to readjust the focus. Extra work is thus thrown on these tiny muscles, as the changing of focus occurs sometimes a hundred times a minute.

Another cause of eye-strain in reading on trains is the poor lighting usually encountered. Often people try to read their evening papers on a train or street-car when the daylight is fading and before the car lights are turned on. Even with the lights on, the situation is not greatly improved. The cars are frequently crowded and strap-hangers sway back and forth between the paper and the source of light. Usually the light is high up in the center of the car ceiling and is badly placed for reading, the light being too far from the paper and the light rays being reflected into the eyes from the book or magazine. Some trains now carry library cars which have the source of light behind and at one side of the reader.

The best and newest Pullmans have side lights for reading. The usual railroad car-lighting equipment, however, is antiquated. Public opinion will do much to remedy these defective lighting methods. Illuminating engineers can be secured by railroads and other public carriers to devise proper methods of illumination, so that no excuse can be offered for improper lighting conditions.

Vermont Medical Monthly.

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H. C. TINKHAM, M. D., }*Editors.*
B. H. STONE, M. D., }

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EDITORIAL.

The Vermont State Medical Society has completed 100 years of honorable existence. The ninth state society in the country to be formed, it has held, with only a short interval of latency, annual meetings during all this time and for the first 50 years of its existence it met twice a year. An examination of its books cannot fail to show any reader that during this time it has been a powerful instrument for good to the profession and the general public. It has always struggled to maintain a high standard of excellency in the profession by raising the qualifications for entrance and rigorously suppressing quackery not only outside but inside its own membership. One of the earliest acts which we find recorded on its pages is a severe reprimand administered to one of its own members for inducing abortion on a case without sufficient reason and proper council, and

a little later one of its members was severely reprimanded for selling some secret remedy as a specific for diphtheria. It has always been urging laws to raise and maintain high standards, to register vital statistics, to limit preventable disease and to improve the general welfare, and has lived strictly up to its motto, "We labor not for ourselves alone." It has been throughout all its existence the clearing house for medical knowledge—in its earlier days taking the place of medical literature; in its later days, stimulating its members to keep abreast of all development in the rapidly developing science. Differences of opinion have many times arisen about matters of its management but these have always been in the past and always should be in the future settled within its own body and with no peril to its existence or usefulness. We predict another hundred years of constantly increasing influence and prosperity for the Vermont Medical Society. It goes without saying that the best men have always been within its ranks. No one can afford to neglect its influence or spurn its efforts to protect them from the attacks of unreasonable and unscrupulous patients egged on by shyster lawyers.

The one hundredth annual meeting of the Vermont State Medical Society was held October 8th, 9th and 10th, with a record-breaking registration of practically two hundred. The program was carried out in its entirety with no absenteers. Even Heaven smiled on the occasion with unprecedentedly beautiful weather. In attendance, program, weather and everything else, the meeting was a fitting one with which to celebrate the one hundredth anniversary of this society.

NEWS ITEMS.

Dr. Harry A. Whitney, college physician and surgeon at Norwich University at Northfield, Vermont, has resigned his position and has entered general practice in that place. Dr. Whitney's successor at the University is Dr. F. W. Comstock, Tufts 1912.

Dr. Charles P. Chandler, Columbia 1912, has returned home to Montpelier and is associated with his father for a time prior to going to New York and Europe for post-graduate work.

Among the most interesting statements made at the meeting of the British Association for the Advancement of Science recently held, was one by Sir Oliver Lodge, the president of the association, that the secret of the determination of sex may be found in plant life. Sir Oliver said he thought the most wonderful instance of the variation of the sex was that which occurred in flowering plants which bore flowers of both sexes. In these cases the male flower grew only a few inches from the female. The stems which joined them were fed by exactly the same sap, yet just at the joint something happened which resulted in one flower being male and the other female. He did not know what it was that happened and no microscope has as yet revealed anything in explanation of the mystery. The process, said Sir Oliver, was well worth studying, for from this the investigators would probably learn something about sex in times to come.

Dr. E. A. Colton, assistant medical director of the National Life Insurance Company has been quite ill for a month with pleurisy with effusion and is now confined to his home.

Dr. W. M. Robb of Keene, N. H., while making a call recently out in the country was severely injured by the overturning of his motor car. He was pinned beneath the car for some time before assistance came. His left leg was broken. The bolts of the front spring broke and let the car down, this caused the loss of control of the car.

Beginning with the fall term Harvard University and the Massachusetts Institute of Technology intend to maintain in cooperation a school for public health officers, the object of which is

to prepare young men for public health work and especially fit them to occupy administrative and executive positions such as those of health officers or members of boards of health, secretaries, agents and inspectors of health organizations. The requirements for admission are that graduates of colleges and scientific schools who have received adequate instruction in physics, chemistry, biology and French or German may be admitted to the school. The medical degree is not the prerequisite for admission. The administrative board which will conduct the new school is composed of Prof. Wm. T. Sedgwick, Dr. Milton J. Rosenau and Prof. Geo. C. Whipple of Harvard.

On the assumption that physicians have money in the form of bonds, stocks and notes, the Ramsey County Board of Equalization has directed the county assessor to assess every physician whose name appears in the city directory, from \$500 to \$1,000 for moneys and credits.

The Chittenden County Medical Society at its annual meeting held September 25th elected the following officers for the ensuing year:

President.....C. A. Pease
Vice-President.....T. S. Brown
Secretary and Treasurer.....E. H. Buttles
Executive Committee—

E. T. Brown, Sidney Morrison, O. N. Eastman.

Members of House of Delegates for 2 years—

J. B. Wheeler, F. W. Sears, I. S. Coburn.

Alternates—

David Marvin, C. K. Johnson.

Members of House of Delegates for 1 year—

F. J. Arnold, L. B. Morrison, F. K. Jackson, H. A. Ladd.

Alternates—

D. D. Grout, G. B. Hulburd, M. W. Hunter, C. F. Dalton.

At the one hundredth annual meeting of the Vermont State Medical Society the following officers were chosen:

President, A. L. Miner, Bellows Falls; Vice-President, Grace Sherwood, St. Albans; Secretary, J. M. Hamilton, Rutland; Treasurer, C. F. Dalton, Burlington; Auditor, C. F. Ball, Rutland; Anniversary Chairman, C. A. Crampton, St. Johnsbury.

BOOK REVIEWS.

GOLDEN RULES OF DIAGNOSIS AND TREATMENT OF DISEASES.—By Henry A. Cables, B. S., M. D. Price, \$2.25. C. V. Mosby Company, St. Louis.

It is difficult to see the utility of such a book. In the reviewer's opinion time consumed in studying this book could be more profitably spent in reading a standard work on medicine.

THE DOCTOR IN COURT.—By Edwin Valentine Mitchell, LL. B., of the Massachusetts Bar. Rebmam Company, Herald Square Building, New York.

In this little volume the author gives some very good advice to medical men who may be called upon to testify in court. The advice is sound and all physicians should read a book of this sort in order that when on the stand they may make a more creditable appearance.

A TEXT-BOOK OF DISEASES OF THE NOSE, THROAT AND EAR.—By Francis R. Packard, M. D. Second edition. Price, \$3.50. J. B. Lippincott Company, Philadelphia and London.

This is the second edition of what bids fair to become one of the standard works on this subject, it is an especially useful work for one beginning the special study of this subject.

A TEXT-BOOK OF BIOLOGY.—By William Martin Smallwood, Ph. D. Lea & Febiger, Philadelphia and New York.

This is one of the smaller works on this subject and is intended for students' use. The drawings are good and the subject matter is well presented, it should be a useful manual.

GONORRHEA IN WOMEN. Its Pathology, Symptomatology, Diagnosis, and Treatment: Together with a review of the rare varieties of the disease which occur in men, women and children. By Charles C. Norris, M. D., Instructor in Gynecology at the University of Pennsylvania. Octavo of 521 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1913. Cloth \$6.00 net; half morocco \$7.50 net.

In this volume the author has treated his subject in a very comprehensive way. The book is valuable to those interested in this subject.

LABORATORY METHODS.—By Williams and Williams. The C. V. Mosby Company, 801-806 Metropolitan Bldg., St. Louis. Price, \$2.50.

In this volume the authors have collected and described the tests that can be performed with the minimum amount of laboratory equipment. The book is intended for men in general work and no doubt will serve a useful purpose.

A MANUAL OF OTOTOLOGY.—By Gorham Bacon, A. M., M. D., Professor of Otology in the College of Physicians and Surgeons, Columbia University, New York. New (6th) edition, thoroughly revised. 12mo, 536 pages, with 164 engravings and 12 plates. Cloth, \$2.25 net. Lea and Febiger, Philadelphia and New York, 1913.

This is one of the standard manuals of otology and the fact of its having passed through six editions is sufficient evidence of its merit. Many of the chapters have been rewritten, considerable new material and many new plates have been added.

MARRIAGE AND GENETICS. Laws of Human Breeding and Applied Eugenics.—By Charles A. L. Reed, M. D., F. C. S., pp. 182. (5¼x7¼). Price, including postage, \$1.00. Subscription only. The Galton Press, Publishers, Cincinnati, Ohio.

In this book the author states the general laws of heredity, he also has a chapter on social diseases. The book might be read with profit by many laymen.

DIET LISTS OF THE PRESBYTERIAN HOSPITAL, NEW YORK CITY.—Compiled, with notes, by Herbert S. Carter, M. D., Assistant Visiting Physician to the Presbyterian Hospital, Associate in Medicine at Columbia University, etc. 12mo of 129 pages. Philadelphia and London: W. B. Saunders Company, 1913. Cloth. \$1.00 net.

These diet lists have been prepared especially for use in the Presbyterian Hospital, New York City. The book contains besides the regular house diet, typhoid, salt-poor, purin free, gastric, diabetic, anticonstipation and low calcium diets; also sections on the diet in diarrhea and obesity. The lists are well arranged and the explanatory notes add much to their value.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

TONSILLECTOMY.

After describing the anatomy of the tonsil and its surroundings, B. D. SHEEDY, New York (*Journal A. M. A.*, September 27), reports the results of examination three to ten months after operation of 100 patients who had had their tonsils removed by some one of the usual methods. He finds the following types of postoperation deformities: "1. The pillars on both sides seem to have disappeared, leaving a flattened surface where the tonsil and pillars formerly were and a much-narrowed opening into the nasopharynx. 2. The pillars on both sides seem to have grown together, leaving but one pillar where there were formerly two, with the uvula pulled to one side or the other. 3. The anterior pillar has wholly disappeared and a large amount of cicatricial tissue is deposited on the surface of the posterior pillar, altering its shape and function." Composite drawings made from a number of patients are given, and he thinks the facts show that the last word has not been said on tonsil enucleation. The procedure that has proved, in his hands, almost ideal in preventing the above deformities and also in simplifying the operation of tonsil removal is then described. "In adult patients the surface of the tonsil and pharynx is swabbed over with a 10 per cent. solution of cocaine, the pharynx is cocaineized to prevent gagging, and after cocaineization has been accomplished a solution of bisulphate of quinin, from 1 to 1.5 per cent., is injected into the cellular tissue surrounding and lying outside the capsule of the tonsil. This infiltration causes loss of sensation and the operation is done without pain. In children under 14 years of age ether should be employed. Just as the bottom of a bag may be pulled through its mouth so that its inner surface becomes the outer, so may the capsule of the tonsil. With a tonsil tenaculum inserted as deep as possible into the center of the gland, avoiding the capsule, take hold of the tissues extending from one side of the capsule to the other and make traction until the junction of the mucous membrane with the capsule is apparent. Then introduce a small, blunt-pointed tonsil-knife (Douglas) under the mucous membrane at the point of junction with the capsule and incise around the tonsil (this incision later on acts as a guide for the wire when the snare is used), and, if the capsule is so contracted that the gland will not invert, make a nick in the upper angle of the capsule comparable to the nick or incision made in the prepuce to permit the escape of the corona glandis in phimosis, and then with a little more traction endeavor to invert the tonsil, as you would invert a uterus by pulling on the cord of a retained placenta. In 90 per cent. of the cases slight traction will invert the tonsil. After it is completely inverted place the snare around the mass as shown on the chart; then slowly tighten the wire, which slips into the slit previously made at the point where the mucous membrane joins the capsule, and take from one to three minutes to cut through the tissues. The tonsil will be removed without injury to the pillars, without pain and without hemorrhage." There are some exceptional cases where the capsule will not invert. These are: (1) the very large tonsil in which the hypertrophied tissue has escaped from the capsule

and already inverted the tonsil; (2) where the oropharyngeal surface of the tonsil is very much limited by contraction and by cicatricial tissue, and (3) where, with a slightly hypertrophied gland, the cicatricial tissue surrounding the capsule has been displaced by fibrous bands due to prior inflammations and abscesses. After two years' experience with this method, however, Sheedy believes it will give the best results in 90 per cent. of all cases needing operation.

THE NOSE AND EAR DISEASES.

The relation of ophthalmology to the disease of the nose and its accessory sinuses is discussed by W. R. PARKER, Ann Arbor, Mich. (*Journal A. M. A.*, September 27.) The diseases causing orbital disorder are classified by McKay as follows: "1. Mucoceles of the sinuses. 2. Acute and chronic sinusitis with external signs of orbital cellulitis, orbital abscess, tumor growth, edema of the lid or dacryocystitis. 3. Sinusitis without external signs of orbital inflammation, but with ophthalmoscopic signs, as optic neuritis, neurotinitis, retinal thrombosis or phlebitis; or without ophthalmoscopic signs, but with visual disturbance, as scotoma, visual field defects, ocular muscle paralysis or fifth nerve disturbance. 4. Cases in which the association of sinus disease has been asserted, but questionable, as glaucoma, iritis, uveitis, keratitis, cataracts and vitreous opacities." This classification, he thinks, in general, is excellent, and he considers here only the third and fourth groups. Optic-nerve involvement is said to be due to mechanical pressure by inflammatory exudates, and one of the most serious nerve affections thus produced is retrobulbar neuritis. We may overlook a general toxemia as a cause, however, but he asks whether it is not the chronicity rather than the location that has most to do with eye involvement, as it is not always the nearest sinus that is diseased in retrobulbar neuritis. Whatever the source, however, some brilliant results have been obtained in treatment of the sinuses, and no examination of these cases is complete with them overlooked. The possibility of optic atrophy from suppuration or some other sinus involvement is undeniable, but he has never seen a case in which a causal relation could be traced. There is no one form of visual field contraction pathognomonic; almost any form may be produced. The most common in retrobulbar neuritis is irregular central scotomas, with or without visible fundal changes. While paralysis of extrinsic ocular muscles is rare in sinus disease, parietic conditions may occur through involvement of the muscle itself or its nerve. In certain cases the ocular symptoms may be the only demonstrable manifestations of the sinusitis, and it is becoming common practice to operate on the sinuses where affection of the orbit or retrobulbar neuritis exists. On the other hand, where optic atrophy or true paralysis of the extrinsic muscles exists, confirmatory local symptoms should be sought for before resorting to surgery. In the two cases of thrombosis of the central vein which he has examined, he was able in neither to establish any causal sinus relations. The sinuses were not operated on and the real source of trouble may have been overlooked. In cases of questionable association of sinus disease, including glaucoma, iritis, uveitis, keratitis, cataracts and vitreous opacities, he says he can see no reason why iritis and

also uveitis should not result from an affection of the sinuses. The number of diseases remaining in the last group may be even less when their etiology is better known.

AUDITORY ACUTY.

W. A. WELLS, Washington, D. C. (*Journal A. M. A.*, September 27), remarks on the lack of satisfactory accurate methods of testing the hearing, qualitative as well as quantitative, and examines and shows the deficiencies of the various methods in use. Strictly speaking, he says, we cannot really measure auditory sensation at all because it is not a quantity divisible into equal units. We take as a criterion the lowest energy needed to produce a perception of sound, the liminal value or, from the standpoint of the ear, what we call the threshold of excitation. In this we are obliged to depend on the intelligence, aptness and attention of the patient, and expectation and suggestion, and, in case of children, fear, nervousness and anxiety are factors that affect the validity of the tests. Fatigue of the ear also lowers the threshold, as he has found by recent experiments. The sources of error in these tests, which are many, should be understood and carefully borne in mind. The one most to be guarded against is that of depending on distance as a reliable means of estimating sound intensity. Admitting that the intensity of sound diminishes with distance in a geometric ratio, the regularity of this is disturbed by other factors, the absorption and reflection of the sound-waves, the influence of extraneous noises and the perception of the other ear, may, singly or together, upset all calculations made from the commonly employed tests. The errors arising from the lack of a uniform initial intensity are encountered in those tests in which this is depended on, as in the use of the human voice, the intensity of which can only be roughly gauged and differs even with the choice of vowels and their arrangement. Really all the tests are open to the objection that they apply only to limited portions of the auditory field. "A general survey of the subject of auditory mensuration leads to the inevitable conclusion that there is great need of a system that will meet the exacting requirements of otologic purposes. The ideal instrument for testing audition, from an otologist's standpoint, would be one capable of producing all the notes of the scale, from the highest to the lowest, in pure tones free from harmonics and capable of giving these notes in intensities readily measurable and varying from a point below the threshold of excitation of the most sensitive hearing up to a degree necessary to awake sensation in persons suffering from the most profound deafness. Moreover, in order that such an apparatus may deserve universal acceptance, it must be possible to construct as many others as are wanted of the same type, each constant for itself and precisely similar to the others. It is only then that we can hope to make it available for a uniform notation comparable among different observers."

SLUDER'S TONSILLECTOMY METHOD.

A. M. CORWIN, Chicago (*Journal A. M. A.*, September 27), advocates the Sluder method in tonsillectomy, the idea of which is that the tonsil when scooped up by the ringed margin of a fenestra in

one end of a stout shaft introduced below and behind the gland, pressing it upward and forward and outward, to the rigid alveolar eminence of the jaw, can be put entirely through this opening, especially if contra-pressure is made on the tonsil with the finger inserted in the mouth and applied to the outside of the palatoglossus. When thus put through the fenestra the gland can be quickly separated from its attachments outside the capsule by a guillotine pushed as with Dr. Sluder's instrument or pulled as with the ring guillotine, or severed by scissors or knife. He emphasizes certain points of technic, such as keeping the entire gland in front of the ring as it is brought upward and forward, pushing the last vestige of the gland through the fenestrum with the fingers, making sure of complete dissection, having the blade neither too sharp nor too dull, and the use of a tonsil hemostat immediately after the removal with its pad soaked with a styptic preparation. He prefers having a gas and oxygen anesthesia administered by an expert rather than the use of ether, chloroform, or ethyl chlorid. In his judgment, based on a large experience, the Sluder method is applicable to all cases except the rare ones, where incomplete measures or inflammatory processes have left the parts bound in a network of rigid scars with little tonsil tissue present. Nearly half of his paper is taken up with answering the objections made by Dr. Freer to the Sluder operation.

COMPLICATIONS OF NOSE OPERATIONS.

The various complications that may arise during or after operation for correction of septal deviation are noticed by G. W. MACKENZIE, Philadelphia (*Journal A. M. A.*, September 27). He first speaks of cocaine or epinephrin poisoning. With the former there is paleness, tremor, slight pupillary dilatation, and sometimes the patient faints. He has never seen cases that he could call alarming, and if the patient is placed in a prone position and reassured the symptoms pass off. Amyl nitrate is perhaps the best physiologic antidote. Epinephrin produces entirely different symptoms. The patient complains of a throbbing sensation throughout, but especially in the head and chest. The face becomes cyanotic and the pulse rapid and of high tension. The symptoms pass off promptly as a rule. Air embolism may occur from the injection of Schleich's solution. He has seen it caused with a defective syringe. Among surgical complications he has seen an incomplete primary incision made, lacerating the mucous membrane. Adhesions may cause delay and be to some extent responsible for perforations. Old fractures may bring this about. Perforations of the mucosa may in some cases be unavoidable, but if recognized they are not so serious. Their causes are imperfect infiltration of the mucosa, so-called adhesions, fractures with overlapping edges, recklessness and lack of experience. One or two slight ones may not cause much trouble unless they are on corresponding points of the two slides, when they are liable to make a through-and-through perforation. Breaking off a piece of the chisel may occur in trying to remove too large pieces of bone at once. Excessive bleeding during operation may cause alarm. It is usually venous and occurs during operation low down and in front. Hence he attacks this quarter after all the rest has been attended to. Unintentional fracture of the septum near its posterior extremity may cause some unsat-

isfactory results. A faulty position of this kind of fracture may be corrected some days after the operation. Faulty packing of the nose may cause the rolling up of the flap and thickening of the gauze; a slip of gauze may get through a button-hole and prevent healing. Sometimes it may happen that a piece of gauze may work loose behind and cause gagging and coughing. To avoid this, Mackenzie uses short strips of 1-inch gauze so that it can be removed without disturbing the whole dressing. Mild infection of the wound may occasionally occur or sometimes a severe one. One of the causes of severe reaction he has found to be the combining of the septum operation with one or more operations on the turbinates or accessory sinuses. Depression or flattening of the nose is rare, but might follow too free removal of cartilage and infection. Hematoma can usually be prevented by proper packing. Erysipelas is about as liable to follow septal operation as others, and acute empyema of one or more accessory sinuses may also occur. It may have pre-existed, however, and be stirred up to an active recurrence, and it is well in suspected cases to exclude or cure such a condition beforehand.

MIDDLE-EAR DEAFNESS.

G. E. SHAMBAUGH, Chicago (*Journal A. M. A.*, September 27), remarks on the confusion that exists regarding the diagnosis and especially the prognosis of obstructive middle-ear disease. He thinks it would be a distinct advantage if the term chronic catarrhal otitis media were dropped and "chronic simple otitis media" or "chronic purulent otitis media" were substituted for it, as conveying a better idea of the pathology, which is that of infection of the membrane lining the middle-ear chamber, with round-cell infiltration and thickening and later formation of fibrous connective tissue. Exacerbations are liable to occur, usually from infections of the nasal pharynx. A persisting tubal occlusion may or may not exist and, if so, is shown by a more or less marked retraction of the drum membrane. The defect in hearing is due to obstruction in the conducting mechanism, chiefly by fixation of the stapes. The hearing defect is apt to be aggravated during exacerbations, from the closing of the tube. The retraction of the drum membrane is no index to the defect in hearing. It may be a permanent after-result when the tubal occlusion has disappeared. The reason why certain patients with recurring ear infection suffer so little or not at all in their hearing is due to the absence of inflammatory adhesive bands which are a common result of the condition in the tympanum. The difference in their development will make a marked difference in the hearing capacity. The prognosis as regards deafness is on the whole better if the tubal occlusion has disappeared and the changes in the tympanum are less active. A persistent tubal occlusion, on the other hand, is of bad significance. Another factor in the prognosis of long-standing cases is the occurrence of secondary degenerative changes in the cochlea. The labyrinth defect can best be detected by locating the higher notes of the Galton whistle. Generally speaking, the chances of improvement in hearing are less in cases not dependent on occlusion of the tube, and where adhesive bands in the tympanum have been formed, causing deafness. In cases dependent on the persistent occlusion of the tube, especially with

secretions in the tympanum, treatment is more usually effective. It is important to note the conditions in the nose and throat that cause or keep up the ear trouble, and their examination requires care and judgment. The general and indiscriminate operating for disease in these parts should be discouraged, but adenoids and repeatedly infected faucial tonsils always call for operation.

TEMPOROSPHEOIDAL ABSCESS.

F. P. EMERSON, Boston (*Journal A. M. A.*, September 27), gives a full report of a case of temporosphenoidal abscess in a young man, aged 22, in which there was also the probability of a general meningitis, treated by the Haynes operation for decompression and drainage through the cisterna magna. A second operation on the opposite (right) side, revealed the abscess. Hexamethylenamin, $7\frac{1}{2}$ grains, was given four times a day. The patient recovered. The case emphasizes the importance of early decompression and the value of hexamethylenamin when there is sufficient circulation to enable it to reach the vital centers; also the acid reaction of the secretions which only occurs in the early stage of meningitis, and of attention to secure proper drainage. He sums up the important points as follows: "1. The Haynes operation for drainage through the cisterna magna is not a difficult surgical procedure. 2. Further study is necessary to determine whether the Haynes or any other procedure is effective, except in the early stages of purulent meningitis. 3. This may depend on whether the infection is always accompanied by edema and serous effusion. It seems possible that, as a primary manifestation, there might be a plastic exudate, fibrinous in character, which would not drain until a later stage, when it became purulent. Even if this were so, a decompression operation might so relieve the intracranial pressure that the patient would have a chance to survive until the leukocytes could take care of the exudate. 4. The pressure of a large brain abscess makes the diagnosis of general meningitis in this case uncertain. 5. This case is reported in some detail to show also how a little blocking of drainage is followed by hiccough or vomiting, even as late as the third or fourth week, in cases of brain abscess. 6. Whether the drainage through the cisterna magna contributed to the successful outcome may be an open question; it apparently did not add any danger to the patient."

RADICAL EAR OPERATION.

C. F. WELTY, San Francisco (*Journal A. M. A.*, September 27), publishes statistics of sixty-six cases supporting his claims of the advantages of his method of using Thiersch grafts instead of the tampon in the radical ear operation, both in shortening the time of treatment and in giving improved hearing. It also, he claims, lessens the likelihood of caries and of the necessity of reoperating. The hearing is not hindered by the single layer of epidermis left by this operation, as it is by the granulation tissue that forms where the curetting and tampon is employed. He reviews the figures of the other operations to show that the hearing is reduced in the majority of cases after the radical operation by the other methods, while by his method with its better bone conduction-results he can promise improved

hearing in all cases of patients under 50 years of age who can hear a whisper at 5 feet or less, provided there is nothing seriously wrong with the procedure, such as removing the graft too soon or allowing it to remain permanently. In patients who hear a whisper 10 or 15 feet off, he does not promise betterment. If it is heard at 20 feet or more he can promise that hearing will be improved.

CHRONIC LARYNGITIS.

E. MAYER, New York (*Journal A. M. A.*, September 27), describes the symptoms and treatment of chronic laryngitis. First among the etiologic factors come the obstructive conditions of the nose, causing mouth-breathing and preventing properly warmed air entering the larynx. Chronic catarrhal conditions of the naso-pharynx may extend to the larynx, but one of the most frequent causes is either the elongated uvula or its papillomatous tip. Hypertrophied lingual tonsils may have to be treated first and follicular pharyngitis and pressure in the auditory canal may cause irritation and trouble. Constitutional, digestive and cardiac disturbances and pressure of new growths and enlarged glands may have to be relieved before a cure can be obtained, and dusty occupations or exposure to gases may be a cause. Alcoholics are specially susceptible, as are also males at the age of puberty. Continued use of tobacco often retards a cure. Sudden changes of temperature are very common causes. Improper use of the voice by actors, singers or public speakers produces some of the most difficult cases to treat. The condition is usual local hypertrophy, the singer's node occurring at the point between the anterior one-third and the posterior two-thirds of the cord. After removal of the causal factor, the first order must be rest, the more complete the better. The directions are given for the use of sprays and local applications of tincture of iron, iodine, alum, etc. Medicated lozenges containing benzoic acid or krameria during the day are useful. Medicated steam inhalations of compound tincture of benzoin and camphor and iodine, etc., are recommended and formulas given. The patient should remain indoors fifteen or thirty minutes after each application. Tobacco should be prohibited and faulty methods of speaking corrected. Often a complete change of air and scenery is useful. Cold sponging of the upper part of the body, proper clothing, regularity as to meals and regulation of the bowels are measures recommended.

SYPHILITIC LARYNGITIS.

J. C. BECK, Chicago (*Journal A. M. A.*, September 27), enumerates and describes the various types of syphilitic laryngitis. The congenital form is rare and the late hereditary type is accompanied with the Hutchinson symptoms and the predilection of attack is the epiglottis. The ultimate changes are very severe. Of the acquired forms, very few cases are on record of primary chancre of the larynx. The erythematous form of specific laryngitis may be compared to a catarrhal condition, only with a deeper injection of the mucosa. The papular type is an early one, and condylomas are not very frequent and also appear early as a rule. The infiltrated form of laryngitis may properly be called the transitional stage from the early to the later form.

The epiglottis is the most frequent location, though other parts are often infiltrated. The nodular form is somewhat rare and bears resemblance to lupus of the larynx. Solitary gumma of the larynx is more frequent than is recognized and is frequently mistaken for other neoplasms. The diffuse gumma has a predilection for the epiglottis, which is often entirely destroyed by its breaking down. In the perichondritic form of laryngeal syphilis the arytenoid is most often involved; it is a late secondary process. One may look for considerable difficulty with breathing and difficulty in swallowing, and should be on the alert for surgical emergencies. The end-results from all forms of destructive laryngeal syphilis, but especially those from the perichondritis, is granulation tissue in the form of cicatrices of excrescences causing more or less dyspnea. A form of laryngeal syphilis without ulceration is known as parasyphilis of the larynx, and is characterized by general cicatricial narrowing of its cavity. The general treatment of the conditions is passed over as every one is familiar with the regular specific methods. Something, however, can be said in reference to the use of salvarsan. There was some fear of the Herxheimer reaction from its use, but this does not seem to have been found a difficulty. As an early treatment salvarsan seems to have been successful. Since syphilitic laryngitis is not usually painful, local treatment may be employed such as resection of chancre, the use of calomel or iodol insufflations, mild solutions of silver nitrate, etc. When the condition becomes more advanced and there is much swelling, surgical measures, such as tracheotomy, may be called for. The management of the end-results varies according to the conditions. Incisions of bands, resection of cicatrices with dilatation, and if there has been very severe perichondritis causing obstruction laryngostomy may be required.

LARYNGEAL TUBERCULOSIS.

F. L. DENNIS, Colorado Springs (*Journal A. M. A.*, September 27), thinks that consumptives are not as a rule systematically examined for laryngeal involvement early enough or often enough, even in sanatoriums. Primary laryngeal tuberculosis is an exceedingly rare disease, and not every hoarseness or even laryngitis in a consumptive is necessarily tuberculous. A patient may also have the disease and not be hoarse, as in the case of a slight ulcer in a part not directly concerned in speech. Pallor of the mucosa, unless localized in the throat, has no significance. The important diagnostic sign is a thin line of mucus in the posterior commissure and over the top of interarytenoid region. Another is redness of one cord, the other being normal, which is almost diagnostic, and he has also noticed a slight infiltration of the epiglottis, which he has suspected being tuberculous, though it has not always developed characteristically. A consumptive may have a simple catarrhal laryngitis, but every affection of this region is suspicious and should be isolated. Malignant growths may confuse the diagnosis and here a tuberculin test may be useful. Dennis believes firmly in the value of treatment in tuberculous laryngitis. The treatment of the lung disease is of first importance; next comes rest and avoidance of irritation by coughing, talking, etc. Pain in swallowing should be relieved, as the patient's nutrition is most important, and he will not take enough food if it is with agony in taking. Local and operative treat-

ment may be demanded. Dennis has himself had best results from local applications of liquor formaldehyd in infiltrations, strength 3 to 10 per cent., thoroughly rubbed in, and trichloroacetic acid for ulcerations applied in saturated solution at intervals of from seven to ten days. Both are most useful in non-surgical cases of active tuberculosis with high fever and extensive involvement of the larynx, or in patients who cannot endure the idea of "cutting." Dennis believes in surgical treatment, though not for all cases. In patients showing a fair resistance to the disease, a good outcome may be hoped for. Isolated tuberculomas or vegetations, moderate infiltrations or ulcerations, especially in early cases, are particularly responsive to the curet, the laryngeal punch and the cautery. The cautery point is of much service in massive infiltrations of the false cords, when the double curet might be unsafe. Even in far advanced cases surgery has a place. Dennis concludes as follows: "1. Sufferers from tuberculosis should have their throats examined early and often, and persistent, vigorous treatment should be instituted at the beginning of trouble in the larynx. 2. Proper attention to the general condition is one of the prime essentials. 3. Surgical intervention in appropriate cases offers by far the best prospect of permanent relief, and not infrequently is of much value as a palliative measure."

PARALYSIS OF VOCAL CORDS.

E. F. INGALS, Chicago (*Journal A. M. A.*, September 27), in an article full of details and which it is difficult to condense in an abstract, describes the various forms of laryngeal paralysis, the causation and diagnosis, and adds some brief notes on the treatment of some of the most common and important. First he sketches the innervation of the muscular apparatus and its various functions, and then gives an account of its several paralyses. According to Semon's law, in organic paralysis of the laryngeal muscles, the abductors are always first involved; therefore, if the cords cannot be drawn outward, it promises to be a complete paralysis later. Paralysis of the cricothyroid, the only one in which the superior laryngeal nerve is concerned, is the rarest of all laryngeal paralyses, and may be traumatic after operations or due to pressure, but is most often caused by diphtheria. Carefully watched use of nux vomica or its derivatives is likely to be the most beneficial medical treatment. The abductor paralyses are the commonest organic palsies and most frequently due to vagus or recurrent lesions, though the paralysis may be bulbar or due to inflammation of muscles or peripheral nerves, from different causes. The special points in the diagnosis of each form, unilateral and bilateral, are detailed. If the history points to syphilis, lead or tuberculosis, the appropriate treatment is indicated; in other cases strychnia in gradually increasing doses to its physiologic limit is advised. The spasmodic dyspnea can sometimes be relieved by bromids, antipyrin or amyl nitrite inhalation. Organic adductor paralysis is a sequel of and due to the same causes as abductor paralysis and calls for the same treatment. The appearances are the same as in functional abductor paralysis or nervous or hysterical aphonia. Myopathic causes may sometimes also be found. This last-named type, however, is usually nervous or

hysterical or associated with debilitating conditions, in which case the symptoms come on more gradually. The treatment should be directed to the cause and local applications of a mild astringent, such as zinc sulphate, 2 grains to the ounce, will aid. Nothing is so effective, however, in Ingals' experience, as strychnin in regular and increasing doses. Paralysis of the interarytenoid muscle, causing a triangular chink back of the vocal processes in phonation, is usually due to catarrhal inflammation, but may be hysterical. Treatment should be directed to the causative laryngitis or debility. Bilateral paralysis of the thyro-arytenoidei, causing a gaping of the cords from 2 to 4 mm. in front of the vocal processes in phonation, has, in Ingals' experience, practically always been the result of acute laryngitis, though he has seen one case following measles. It is sometimes very persistent, and proper voice exercises and correct methods of speaking and singing should be secured. Persevering use of the faradic current and thorough trial of the strychnia treatment are also advised.

TONSILLECTOMY.

GEORGE L. RICHARDS, Fall River, Mass. (*Journal A. M. A.*, September 27), describes the methods of tonsil ablation, five in number, namely, finger dissection, of which he claims to be one of the revivers, knife dissection, the operations with the head over the end of the table or with head on the side, and Sluder's operation, which seems to be nearly a perfect method in the hands of its originators though he has not felt called on to adopt it. Removal by galvanocautery dissection is mentioned, only to be condemned. While efficient, it is painful, and has no advantage over other methods. For the prevention of hemorrhage, if it occurs, it is necessary to have some long hemostats and to be prepared to tie a vessel if necessary. He does not believe it is necessary in every instance to tie every bleeding point or the anterior and posterior pillars.

SPECTACLE LENSES.

W. E. SHAHAN, St. Louis (*Journal A. M. A.*, September 27), says that by lense grinders and spectacle salesmen the powers of the lenses are computed by simple additions and subtractions; a lense that has a +5 D. surface on one side and a +5 surface on the other is called a +10 lens. Also a lense that had a 20 D. surface on one side and a -10 D. on the other is called a 10 D. lens. In practice we find that if this double convex +10 D. lens accurately measures the defect and a meniscus lens of this form is ordered with a minus 10 D. surface next the eye, an overcorrection of more than 2 D. will exist. Moreover the ordinary neutralization test fails in such a case as this, for if a -10 sph. lens is held in contact with the convex surface of this meniscus lens it will very nearly neutralize it. Discrepancies similar to this prevail in all meniscus and toric lenses and, lacking some practical way of easily making compensatory computations, the advantages of such lenses have been largely lost except in the weaker forms. His paper is given mainly to the explanation of charts for such computations and of the geometrical optical principles involved.

CASE HISTORIES OF

6324 PATIENTS

TREATED WITH PHYLACOGENS
HAVE BEEN SENT TO US
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WARNING AGAINST NON-SCIENTIFIC DIET SYSTEMS.

U. S. Department of Agriculture Issues Statement about Many Systems of Diet being Recommended for Commercial Profit.

WASHINGTON, D. C.—The U. S. Department of Agriculture has recently had called to its attention, by letters from people all over the country, serious misstatements as to the effects of foods or certain diets recommended by self-styled "experts in dietetics." As a result of these letters, the Department specialists have secured the literature and recommendations of a number of these people and have made a careful study of the things they recommend as diets.

The specialists of the Department have issued the following statement covering this matter:

"In view of the wide spread of literature and advice of so-called 'diet experts,' it seems desirable to warn people against adopting the dietary recommendations of those without real scientific standing in the community. Some of the advocates of freak diets are sincere, but are themselves deluded; while others are fakers, who seek to make monetary gain by advising peculiar systems of diet. Neither class can offer trustworthy advice. In most of the recommendations of these self-established 'experts,' there is hardly a shadow of reason, though they may seem plausible. One of their methods of reasoning is to use isolated and often unrelated facts of science as evidence that their peculiar system is of value. That is, they generally start out with a certain idea, and then strive to prove that they are right by seeking data which seem to establish their theory; but they completely ignore statements in current and historical scientific literature which would negative their contentions. In other words, they completely overlook or do not see the importance of discoveries by scientists which go counter to what they want to believe. It would be easy, following this same system of taking isolated facts away from their context, to produce just as much of the same kind of evidence that these 'food experts' are wrong as they adduce to prove that they are right. In neither case, however, would the method lead to real scientific conclusions.

"As an example of their methods of reasoning can be cited their use of the fact that someone tried to raise rabbits wholly on cooked food. The rabbits did not thrive on such a ration, nor

could it be expected that they would on a diet purely artificial to such animals. From this the 'pseudo' expert draws the deduction that because the rabbits could not live wholly on cooked food, human beings should confine themselves to raw food. No such deduction is warranted. Raw food is natural to rabbits, and this is perhaps a fortunate provision of nature, because the average rabbit would probably have a good deal of trouble lighting a fire or a gas stove to cook food; but it does not follow that man, who has proved cooked food wholesome by uncounted centuries of use, should give it up because of someone's theory.

RAW FOOD.

"Many of these so-called diet systems lay great emphasis on raw foods. Now, there is no objection to anyone's eating raw food if he likes it, or finds after experiment that it agrees with him, provided it is of good quality, free from contamination and wholesome. The truth of the matter is, however, that man's chances of health are best when he eats with moderation a diet made up of clean, wholesome, ordinary foods, well prepared in the usual ways. Such a diet will include some articles to be cooked and others to be eaten raw, such as bread, cereals, fruits, vegetables, meat, fish, milk, butter, cheese, eggs, etc. These articles should be of good quality, free from dirt (visible and invisible) and adulteration, and well prepared.

"As a general proposition, raw food is not cleaner than cooked foods. Proper cooking sterilizes foods, and so renders innocuous pathogenic bacteria and other organisms possibly harmful. Raw foods have to be very carefully washed and cleaned before eating, and as a general rule simple washing, while it will get rid of most of the dirt, will not remove all the bacteria, insect eggs, spores of fungi, etc., that may adhere to them. If the systems of pseudo-reasoning followed by some of these diet experts were logical, it would be possible to draw the conclusion that no one should eat lettuce or other salads, or raw vegetables and fruits. This would not be warranted by true science.

"In some of the literature circulated by the advocates of raw food, their correspondents are urged not to eat animal foods because they say meat is filled with bacteria. This is not true. The surface of meat is not sterile, but the interior

is, except in rare cases. We do not eat raw meat, except dried beef, or something similar, but cause it to be cooked, and this sterilizes it. In most cases where people have suffered, or think that they suffer, from eating meat or any other normal article of diet, the trouble lies not with the actual article but either in the imagination of the consumer or in the fact that the food has not been kept clean, or properly prepared and properly handled after it is cooked.

THE FALLACY OF THE ENZYMS AND PARTICULAR CHEMICAL SUBSTANCES.

"Several of these food experts base their argument for a raw food or other specialized diet on the theory that raw food supplies the body with necessary enzymes; or that a certain food, such as whole wheat bread, supplies lime or some other special substance. If the American people lived wholly on cooked food and ate no fruit or drank no raw milk, it might be necessary to advise them to eat some foods raw, for when clean and of good quality, such things are wholesome. The body, however, normally supplies all the ferments (enzymes) it requires, and the average mixed diets of Americans give them all the raw food that they require. Similarly, if the American people ate nothing but wheat, it might be necessary to advise them to eat whole wheat rather than fine wheat flour in order to get some of the substances excluded from the flour by bolting. Recent investigations indicate that there is a valuable substance in bran, which is lacking in the interior of the wheat kernel. This substance, called by some Vitamin, is, however, present in many other foods, and there is every reason to believe that an ordinary mixed diet supplies all of such material which the body needs. Whole wheat bread is wholesome and palatable and affords an easy way of securing variety in the diet, which is desirable as well as pleasing. The average American who usually gets plenty of the food constituents he needs in his other articles of diet, need not feel compelled to eat whole wheat bread exclusively, simply to supply one peculiar element.

"In the case of the people who decry polished rice, most of them base their assumption that Americans ought not to eat it, on investigations made in oriental countries where rice forms one of the chief staples of a very limited diet, and practically the only starchy food. People who



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live mainly on rice might be expected to need certain elements that are in the part of the rice that is polished off. American do not live on a diet limited to rice; there is, therefore, no logical reason why they should not eat polished rice if they like it; or should not use the unpolished rice if they prefer it. Both are wholesome and valuable.

THE HUMAN RACE HAS SURVIVED.

"If the deductions of many food faddists accepted as facts were really operative, it would be difficult to explain how the human race had survived. The race should have expired very soon after man had progressed enough in intelligence to begin to exercise any choice in his diet and to cook his food. The contrary holds true, as civilization had advanced from the time when man began to cook and otherwise prepare his food.

THE DANGER OF CURATIVE TREATMENT BY MAIL.

"Many of the people who offer dietetic advice for sale undertake to recommend a diet that will cure diseases without ever seeing the patient. The average man talking about his own illnesses frequently imagines symptoms, or describes them so inaccurately that they are not absolute guides to the physician. In many cases, incipient serious ailments or local troubles which give no indication of their presence by pain or discomfort, are discovered by the physician in his laboratory, and relief can be given them which could not be promised later. Very few people indeed would be able to describe their symptoms in words so accurately that the conscientious physician would feel safe in making a positive diagnosis or laying down a method of treatment. Many of these sellers of food information, however, undertake to diagnose trouble and advise a complete remedy purely on the patient's own description of what he believes is a serious condition.

ANY CHANGE SOMETIMES SEEMS BENEFICIAL.

"In many cases, people on beginning a radically new diet, whether it has direct curative value or not, gain or think they gain a benefit. Any marked change in diet or cooking would produce the same effect, because change itself is often a benefit. The man or woman undertakes the new diet feeling convinced that it will help

some real or fancied ailment, and expects results so strongly that imagination supplies them. Some of the cases so benefited are simply transient forms of digestive disturbances. Most of these feelings of discomfort quickly pass by themselves, if we do not dwell upon them and worry about them; but if the person tries a new diet, he is very apt to attribute all improvement to that diet, whether it has any direct bearing on the case or not. In cases of serious digestive disturbances, sufferers should consult a physician of known ability and known standing in their community. To submit such cases for treatment by mail is as foolish as it would be for a man having a complicated and highly specialized business trouble to ask someone who had never seen his factory, and knew nothing about the business except the data he could supply in answer to a set of questions, to supply him with a positive remedy at long distance.

"Much of the advice on diet which has passed from individual to individual, and much of the supposed scientific advice now being sold for a price by some of the food advisers, is really little more than folk lore. A great many of the statements which are used as arguments by the experts for their diets have been traced by the Government specialists, and found to come from works on diet written so long ago as to be no longer considered of value except to the student of the history of dietetics, or else they have been separated from qualifying statements which would make the interpretation given them by the commercial users wholly unwarranted.

STOP WORRYING ABOUT YOUR BODY.

"These circulars of misinformation about diet find their prey principally among people who are always fancying that they have some complaint. If people remain in good physical condition year after year, and observe no marked change in weight, seem in good health and spirits, and are eating any simple and normal mixed diet, they have no need to worry about their food.

"People can expect to be lighter in weight in summer than in winter. As a person grows older he should begin to cut down the amount he eats, and depend on a less complex and simpler diet. It is often said that when a person passes forty, he begins to need a different diet. The reason given is that he does not exercise so energetically as he did, and consequently does

not need the same amount and kind of food that was required to keep up his energy for more active physical work.

"If you like raw food better than anything else, eat it. If you like bread and milk twice a day, eat it. The main thing, as one grows older, is to eat in moderation and then, as always, to see that what you eat is clean and that the cooked food you eat is originally in good condition and that it is well cooked. If you eat raw vegetables and fruits and raw milk, take precautions to see that they are clean before they enter your system. If something really disagrees with you, and the fault lies actually with the article rather than with the method by which it has been kept or cooked, stop eating that kind of food. If you experience serious discomfort which persists, consult the best physician you can discover.

"As a general proposition, be wary of people who offer to give you advice or to cure you without ever seeing you. Finally, bear in mind that each human body has individual characteristics, and that a diet which admirably suits one man who lives in a certain location and does a certain kind of work may not be adapted to another individual living in a different climate and doing a different kind of work.

"No advice is better than the old 'Moderation in all things.'"

THE NUTRITION OF THE POOR.

These are the days in which problems of economy in living are forcing themselves on the public mind. The rise of prices has intruded itself into the conduct of the household and compelled a readjustment in some cases in the distribution of income among the various channels of expenditure. Whatever else may happen, it is fundamentally necessary that certain indispensable requisites of clothing, shelter and food be provided if the individual is to be maintained in a state of physiologic equilibrium and economic efficiency. In the so-called "better classes" the appropriations to such purposes can be adjusted without serious difficulties; but as we descend in the scale of available income a border-line is

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reached at which the barest necessities of life may not always be suitably provided. It is to this stratum of society that the attention of social workers and students of nutrition alike must be directed if reforms are demanded and deserve to be established.

So much has been written about the influence of diet on the physical conditions of the individual, and particularly on growing children who become the workers of the next generation, that most statements in this field are truisms, says *The Journal of the American Medical Association*. The facts have been bluntly, yet effectively expressed by saying that the working man brings into the market his energy—his power of doing work—and obtains for it the most favorable price that he can. His ultimate power as a wage-earner is being influenced by the character of his food-supply. His profits depend, on the one hand, on the amount of energy he can supply and the price at which he can sell it, and, on the other, on the price for which he can buy his source of energy—his food. An abundance of cheap and good food is the first essential for a productive working class.

Much attention has been given to the food requirements of laborers and to the cost of living involved thereby. Professor Underhill found that it required an expenditure of considerably more than twenty cents a day to secure the nutriment adequate for the working classes investigated. Miss Lindsay has studied the diet of the laboring classes in Glasgow, Scotland, during 1911 and 1912 to ascertain whether the working classes of that city get a diet which will enable them to develop into strong, healthy, energetic men able to do a strenuous day's work.

In the case of the really poor—those who have a daily struggle to make both ends meet—even although as the statistics show three-quarters of their meager income is expended on food, a sufficient supply is not obtained. The remaining fourth of the income is quite inadequate for rents, coal, taxes, insurance, etc. The families in which the income is under 20 shillings a week entirely fail to obtain a supply of food sufficient for their needs. The principal foods used were bread, potatoes, milk, sugar, beef and vegetables, such valuable and easily procured products as oatmeal and peas being used in relatively small

amounts. Not one of the families in which the wage was regular and under 20 shillings per week had a diet the energy value of which reached the minimum of 3,000 calories per adult man.

One naturally asks what can be done to improve such diets, since it is not within the province of the dietitian to alter the financial return to the families. Ignorance and bad marketing play their part as well as penury. The protein-rich animal foods, flesh, fish and eggs, are all too expensive for the laboring classes, and any increase in their proportion in the diet is impracticable. The Glasgow physiologists wisely point out that cheese and cheap protein-rich vegetable foods, oatmeal, peas, beans, etc., should be more freely used. The chief drawback is the labor entailed in preparing and cooking them. If the diet of the laboring classes is to be improved, without increasing the cost, time and labor must be expended on properly preparing the more nutritive foods of vegetable origin.

THE OZONE MYTH EXPLODED.

Much has been written and said about the marvelous effects of ozone. All the benefits of life on the mountains, in the forests and on the sea have been credited to the "ozone in the air." The same popular fiction has been used in advertising summer resorts and sanatoriums. Various chemical devices have been manufactured and offered to the public to "make the air of the bedchamber or the sick-room exactly like that of the pine woods." All of which would be delightful if it were only true. For alas, like many other popular delusions, the ozone myth has been subjected to the cold and analytical eye of the scientist. Professors Jordan and Carlson of the University of Chicago have carried on an extensive series of observations and experiments to determine the exact effect and value of ozone. The results of their work appear in a recent issue of *The Journal of the American Medical Association*. The conclusions reached by the men of science is that the hygienic value of ozone would

(Continued on page xx)

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(Continued from page xvi)

be hardly worth considering were it not for the persistent and extravagant claims made by the manufacturers and promoters of ozone generators. So far as the destruction of germs are concerned, these claims have little or no foundation. Some bacteria are undoubtedly killed by ozone under certain conditions, but this fact is of little importance in practical use. Experiments carried on show that human beings are injuriously affected by an amount of ozone far less than is necessary to kill the germs. There is no evidence for supposing that the quantity of ozone that can be tolerated by a human being has the slightest germicidal action. If disinfection of a room is desired it can much more effectively be carried out in other ways. Ozone is of no value in room disinfection. Experiments also show that ozone is of no value as a deodorizer. In very great concentration ozone seems to be capable of deodorizing some odorless substances, so that the odors are diminished or changed. This is partly due to the fact that the ozone masks the objectionable odors by its own odor, and partly to the fact that ozone deadens the sensibility of the nose, so that objectionable odors are less susceptible. Some odors are masked by ozone even in weak concentration, but it is doubtful whether this masking of odors is desirable or advantageous. The unpleasant odor in shops, offices and living rooms, due to insufficient ventilation, is usually a sign that the air needs to be renewed. Why should we deaden the sensitiveness of the nose, which aids us in determining whether the air is fit to breath? This is wrong in principle. Ozone when used in this way is simply a crutch to bolster up poor ventilating systems. Ozone does not make "pure air" any more than strong spices make pure food. If used in a highly concentrated form, ozone has an injurious effect on both man and animal, irritating the throat and lungs. These experiments of the Chicago scientists are further confirmed by experiments carried on by the Hygienic Laboratory of the California State Board of Health, the results of which appear in the same issue of *The Journal*. These conclusions of eminent scientific men simply confirm the experience and observations of past generations. There is no air so good as

outdoor air, and the best way to get it is to open a door or a window. Modern mechanical devices for "purifying the air," as well as elaborate systems for artificial ventilation are, in the main, delusions and snares. If you want good air—and everybody does, if they can get it—go outdoors and get it, or let the outdoors in through the open window.

THE PASSING OF THE BASEMENT HOME.

This month the basement as a living-room will, officially, pass out of existence in Missouri. The movement is significant as the beginning of a realization by the legislative bodies of the country that the conservation of public health is the most important factor in political economy. The basement living-room, coupled with the daily toil of children in factories and sweat-shops, has enormously increased the death-rate among the children of the lowly. Particularly related to a dark, damp basement home is a lowered condition of vitality, which predisposes to infection by tuberculosis and aids the vicious spreading of all the acute exanthems. If, in Missouri, where conditions of population are at most not crowded, such a step has seemed necessary, how much more must such a law be needed in the densely packed tenements of New York, Chicago and other metropolitan cities, asks *The Journal of the American Medical Association*. Missouri, in the past, has insisted that she must "be shown"; here, indeed, she has pointed the way for her sister states.

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TABLE OF CONTENTS

ORIGINAL ARTICLES:—

Address of Welcome to the Vermont State Medical Society,

By Guy Potter Benton, President University of Vermont261

Progress in Medicine and the Public Welfare,

By John L. Heffron, M. D.267

"Pituitrin,"

By Edmond J. Melville, M. D.274

EDITORIAL276

NEWS ITEMS277

BOOK REVIEWS280

AN EPITOME OF CURRENT MEDICAL LITERATURE....282

THERAPEUTIC NOTESxii

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 IT HELPS THE SUFFERER FROM BRONCHIAL
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WHEN THOROUGHLY UNDERSTOOD,
MAKES PLAINER THE **RAISON D'ETRE** OF
CERTAIN CLINICAL FACTS. THUS, A KNOWLEDGE OF THE CHEMICAL CHANGES IODINE UNDERGOES AFTER INGESTION, THROWS LIGHT ON THE CLINICAL PHENOMENA OBSERVED, BUT BETTER STILL AIDS IN DETERMINING WHICH IODINE PRODUCT IS OF GREATEST VALUE.

IDONEEN

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An Important Report

By Professor W. A. Puckner

Secretary of the Council on Pharmacy and Chemistry
American Medical Association

In the Journal of the American Medical Association, September 13, 1913, Professor Puckner reports the result of the investigation of products of a number of pharmaceutical houses. In this report are embodied the results obtained by Dr. R. A. Hatcher, of Cornell University Medical School, who made a special examination of the various digitalis products of these pharmaceutical houses, demonstrating the following

FACTS

First.—That commercial digitalis preparations vary most widely in activity.

Second.—That Mulford Digitalis, the most active, is four times as active as the weakest.

Third.—That the digitalis prepared by other firms, assumed to be physiologically assayed, showed a variation of more than 100 per cent in strength.

Fourth.—That the digitalis next in strength to the Mulford preparation, was only 65 per cent, and the weakest, 29 per cent in activity.

CONCLUSIONS

While there is no official standard of activity for digitalis, Dr. Hatcher adopted the Mulford Fluidextract Digitalis as the standard of comparison, because its activity was that of a good digitalis. The report proves the activity and reliability of the Mulford Digitalis, and coincides with the former report made by the United States Bureau of Hygiene, tabulated in Bulletin No. 48, December, 1908, by Edmunds and Hale, relating to the Mulford Fat-free Tincture of Digitalis—**Digitol**.

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SAMPLES AND LITERATURE SUPPLIED TO PHYSICIANS PAYING EXPRESS CHARGES.
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WHAT IS DENATURED ALCOHOL?

What is denatured alcohol? Frequent references to it are seen in the daily papers and magazines, but few know very much about it. Everyone knows what ordinary alcohol is. It is also called grain or ethyl alcohol.

Most governments derive a large revenue from the sale of ordinary alcohol, and its retail price is very high; yet the cost of manufacture is small. In the United States it sells for about \$2.40 a gallon. It can be made from corn for less than 20 cents a gallon. The difference between cost and selling price represents the internal revenue tax and the profit of the wholesale dealer and middlemen.

Apart from its use in making whisky and other beverages, grain alcohol is a most useful liquid, and in most countries is widely employed for industrial purposes—as a fuel, in hat and whip factories, in making varnishes, for cleaning metals, paint, woodwork, in color, chemical and dye works, etc. That grain alcohol may be sold as cheaply as possible for domestic and other purposes, most countries have an untaxed grain alcohol, mixed with wood spirit, benzine or other agents that render it unfit for drinking purposes, and yet permit of its use in the various industries. This is denatured alcohol, a specially prepared grain alcohol selling for about 50c a gallon; cheap because untaxed. Before the introduction of denatured alcohol, people had to choose between paying \$2.40 a gallon for domestic alcohol, or using the poisonous vile-smelling wood (methyl) alcohol; or they could use the equally poisonous “deodorized” form, which sells at about the same price as denatured alcohol.

About 1890 a comparatively cheap method of “deodorizing” the ill-smelling and vile-tasting wood alcohol was discovered, and under various names, such as “Columbian Spirits,” “Purified Wood Alcohol,” “Colonial Spirits,” “Standard Wood Spirits,” “Cologne Spirits,” “Union Spirits,” “Eagle Spirits,” “Green Wood Spirits,” etc., this violent poison was put on sale. It was widely and shrewdly advertised and all sorts of virtues were claimed for it, the chief being that it was a cheap and comparatively harmless substitute for ordinary ethyl or grain alcohol. It could be used instead of grain alcohol in making varnishes, liniments, tinctures, hair-dyes, etc., and as a fuel in lamps and stoves. At first its poisonous character was denied *in toto*. This led to its use in the manufacture of Jamaica ginger, essence of lemon, liniments, alcoholic extracts, cheap whisky and proprietary “remedies.”

Soon stories of sudden death as well as of total and incurable blindness following the use of this horrible poison began to appear. It was not until a wholesale drug firm in Baltimore had been mulcted in heavy damages for using “deodorized” wood spirit as a substitute for the four-times-as-expensive grain alcohol in the manufacture of Jamaica ginger that the trade began “to sit up and take notice.”

Later, examples of wholesale poisoning began to be reported. Parties of all classes of people—workmen, picnickers, bar-room habitués, Indians, etc.—indulging in cheap whisky and its substitutes died or became blind. Still later, it was found that unfortunate painters, especially shellackers of beer-vats, working in confined and

(Continued on page x.)

GLYCO-HEROIN (SMITH)

For

Coughs

Bronchitis

Phthisis

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Pneumonia

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THROUGH ITS DEPENDABLE
THERAPEUTIC EFFECTS

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The adult dose of
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intervals, according
to the requirements of
the individual case.

For Children of ten or
more years, from one-quarter
to one-half teaspoonful.
For children of three or
more years, from five to ten drops.

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In accordance with the provisions of the law we
have placed our sworn statement on file with the
Postmaster at Burlington, and reprint it herewith:

*STATEMENT OF THE OWNERSHIP, MAN-
AGEMENT, ETC., of VERMONT MEDICAL
MONTHLY, published monthly at Burlington, Ver-
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Managing Editor, B. H. Stone, } Burlington, Vt.
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Burlington, Vt.

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Known bondholders, mortgagees, and other
security holders, holding 1 % or more of total
amount of bonds, mortgages, or other securities.
None.

H. C. TINKHAM,
Managing Editor.

*Sworn to and subscribed before me this first day of
October, 1913.*

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ALL IN FIRST CLASS CONDITION.

ADDRESS,

VERMONT MEDICAL MONTHLY

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"in the eating," is



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(Continued from page vii.)

unventilated places, were stricken with blindness, and on investigation it was proved that the be-fouled, rebreathed and methylated atmosphere was responsible for the result. About the time twenty persons were poisoned in Kentucky, an equal number of wood-alcohol victims were, within twenty-four hours, killed and blinded in Dorpat, Russia. As a result of these "accidents" agitation against the unrestrained sale of this poison was begun.

Denatured alcohol is as cheap as or cheaper than Columbian spirits or any other kind of "deodorized" wood alcohol and can be bought at drug-stores wherever the "deodorized" poisons are on sale. There is no longer any excuse for the sale of "deodorized" wood spirits. Its manufacture should be prohibited by law. It serves no purpose that "denatured" alcohol will not serve and its existence is a menace to public health.

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Vermont Medical Monthly.

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NOVEMBER 15, 1913.

NUMBER 11.

ORIGINAL ARTICLES.

ADDRESS OF WELCOME TO THE VERMONT STATE MEDICAL SOCIETY.

BY

PRESIDENT GUY POTTER BENTON

University of Vermont.

Burlington, Vt., October 8, 1913.

Mr. President and Gentlemen:—

The welcome address is becoming a habit with me. And frankly let me confess it's a habit I rather like. It is more pleasant to say with hearty sincerity "We're glad you've come" than it is to say with a sigh of relief "We're glad you're gone." I am perfectly willing, therefore, that someone else should say farewell so long as I may be permitted to say "All hail." I can assure you, however, that so far as this particular body is concerned, though we shall say God-speed when we say good-bye, it will be said with genuine regret that the hour of your departure has come.

To-day, gentlemen of the Vermont State Medical Society, I welcome you to the Queen City of the State. Though I am without any delegated official authority from the city of Burlington, I know so well the hospitable spirit of our mayor and all our citizens that I do not presume over-much in affirming that the metropolis of the Green Mountain State is honored in having within its borders for their deliberations this splendid company of Vermont doctors. Burlingtonians, I think, have some appreciation of the worth of your profession and want you to feel quite at home in our midst.

Burlington, backed up by Mount Mansfield and Camel's Hump, with Lake Champlain and the Adirondacks in the foreground, offers an inspiring retreat for your important deliberations and its people are a guarantee of unstinted hospitality.

It is my especial privilege and very great pleasure to give you assurances of hearty welcome to the University of Vermont and to its College of Medicine where your sessions are to be held. To recite the history of the origin and

development of their own state university to a company of men who know the state and its institutions as thoroughly as you do, would indeed be a work of supererogation. Suffice it to say that a state whose forefathers founded the first state university on American soil has no call to make apology for its educational traditions. Educationally Vermont is not all that it should be, nor indeed all that it may be, but neither is any other state for that matter. This state which in 1762, immediately after the first settlers laid the foundations of their homes at Bennington, voted a tax for the support of a public school, will never be content with an educational system inferior to any. The state which by direct legislative enactment in 1791 founded this university as its pioneer institution of higher learning, will insist upon educational advantages for its youth which will guarantee the permanency and progress of all that is best in civilization. We will not become comfortable in educational complacency. We will demand improvement in all departments of educational work from the kindergarten to the high school and through the university. In defense of the fair name of Vermont, though, we will never consent that her honor be trailed in the dust by the obloquy of unjust comparisons. We must not defile our own garments by advertising Vermont as a state worse than others in the Union. To parade in public speech or through the press before the world our state as relatively more illiterate, irreligious or immoral than other states is to do her unmerited and irreparable injury. Desirable people casting about for new homes will hardly care to locate in a state whose own people pronounce it decadent. In the name of my honorable ancestry who caught inspiration for plain living and high thinking from the rugged hills of Vermont and other New England states I protest against aspersions upon this state whose people from its very foundation have stood unflinchingly for sound learning, true religion and high morality. In the name of the splendid citizenship of this state, whom I have come to know, from obscure mountain town to metropolis, I protest against the slanderous statements which make us objects of ridicule and contempt before the rest of mankind. In the name of our

youth, the glorious young manhood and womanhood of Vermont, unsurpassed in industry, lofty purpose and sturdy character by any I have ever known, I protest against the unjust charge of deterioration put upon the rising generation. I know something of the people of other states and I soberly declare I do not believe that Vermonters are below the average of intelligence, morality and efficiency obtaining throughout the nation. To affirm the contrary is either to confess ignorance of conditions elsewhere or it is a malicious libel upon an enlightened, honest and thrifty people. The worst conditions in Vermont can be duplicated in every other state of the Republic. It is a burning shame, an indefensible outrage upon decency to hold Vermont up to universal disgrace by representing her as worse than other states. We are not a reactionary people. Our civilization is not decadent. Of course we want to make our churches and schools and conditions of life better, but such a purpose will never be accomplished by singling out isolated conditions and shouting them from the housetops as characteristic of the entire state. We must agitate for community improvement but let it be done quietly and effectively as a purely family affair without announcement that will carry from ocean to ocean the impression that Vermont people believe themselves to be worse than all the world beside. We have no modern Sodom and Gomorrah here in our valleys and mountains. Let us herald to all the world, as our efficient state department of publicity is doing, that Vermont is the most beautiful, the most promising, the most inviting commonwealth in America. Then let us set for ourselves the task of "making good." As loyal citizens, jealous of the good name of our state, let us quietly and without ostentation seek to mend conditions where mending is needed. Let us proclaim to mankind our excellence while we strive earnestly to keep our state in the forefront of those educational and social movements which will contribute to the amelioration of human woe and suffering and to the forward march of civilization.

Doctors, I am glad to welcome you in behalf of an institution which exists by mandate of the state for just such a mission. From that day away back yonder when the legislature founded the University of Vermont this institution has stood as a perpetual proclamation to

the world that the people of this state are not wanting in the love of learning.

By reason of recent legislative action with the governor's approval, the University is prepared as it never has been before to serve the people of the entire state. A university of this sort is something more than a college. Of course, it owes primarily to the students who come to its halls a special responsibility for proper instruction, but its mission does not end there. As a state institution it owes an obligation of intellectual, industrial, professional and moral leadership to the entire state. The State University properly conceived, is the appointed instrumentality to lead in civic advancement, in social service, in economic studies, in moral uplift, in rural improvement, in the betterment of health conditions, in educational guidance, and in the effort for increased efficiency in all legitimate lines of commercial activity. The university, appreciative of its commission from the people of Vermont to whom it belongs, accepts its solemn responsibility and with new vigor is ready to work with all the organized forces of this state for a newer and better Vermont. It wants to do this with emphasis upon the splendid inheritance handed down from the honored fathers of this state, with a full appreciation of the intelligence, morality and progressive spirit of our present population and without insinuation that the people of Vermont are not equal to the best to be found anywhere on God's foot-stool. Progress is life; stagnation is death; inactivity is retrogression. We want Vermont to keep moving constantly forward toward larger and better things, not because it has not been moving but because, for the sake of the common welfare, it dare not stop moving.

For some years past the members of the educational staff of your university, through extension courses, have been carrying the work of many of our departments out into all parts of the state. The university is now being projected with increasing efficiency from the hill at Burlington out into the remotest sections of Vermont. Through its newly organized departments of agricultural extension and agricultural education the State University will reach out to every farm and every school house in Vermont with its counsel and inspiration.

Why should I, then, not be happy to welcome you, the physicians of Vermont, in behalf of

such an institution as the one which is now honored in serving as your host? You are bidden to feel especially at home in the University of Vermont College of Medicine, one of the oldest institutions of its kind in the United States. As far back as 1809 anatomy and surgery were taught here and the medical college, as such, was established in 1822. From that day forward our College of Medicine has been performing a service of inestimable value to Vermont, to New England, and to the nation. To-day, nearly every hamlet in this state enjoys a sense of security guaranteed by the presence of a capable and self-sacrificing doctor trained by a Vermont College of Medicine for service to Vermont people.

In recent years the College of Medicine has become an integral part of our university system and the state has been giving it more generous appropriations for the better fulfillment of its important mission. The members of the Faculty of Medical instruction are now on a parity of participation in the university government with those employed in our other departments.

The State Laboratory of Hygiene and the Board of Health are closely related to the College of Medicine. Doctors Caverly, Stone and Whitney of these organizations are members of our instructional force and Doctor Dalton, the efficient secretary of the State Board of Health, as a former colleague, is still in sympathetic cooperation with the College of Medicine. The Mary Fletcher and Fanny Allen Hospitals' with their fine clinical facilities are each under a management that appreciates the College of Medicine by the appointment of our medical professors to positions of responsibility on the operating staff of each with privileges of observation and study to our students that are of the greatest value.

By a late substantial expression of appreciation the state has given the university appropriations for the establishment of a dispensary and a maternity ward. These have been established and are now in operation to the greatly increased benefit of our medical instruction. The Dean of the University of Vermont College of Medicine is an enthusiast for medical education and the marvel to me is that one so in demand for his professional services can give himself up with such earnestness to the details of administrative direction in the college of medicine. Since it can not be due to the paltry salary that ac-

companies the deanship, I conclude that it is unselfish love of his profession and a belief in its wonderful possibilities that prompts the personal sacrifice of the Dean of the University of Vermont College of Medicine to make this institution worth while by the state. From personal observation I am fully persuaded that the state historian writing the record of our day will declare that the annals of Vermont have never known a greater public benefactor than the skilled anatomist, the accurate diagnostician, the maker of efficient physicians, the great surgeon, the genial, whole-souled, brotherly gentleman—our distinguished dean, Doctor Henry Crain Tinkham. Supported by a teaching body of men who have been tried in their profession and not found wanting, Dean Tinkham has put the University of Vermont College of Medicine in the very front rank of such institutions so that the Council in Education of the American Medical Association has given it a classification of Grade A. I rejoice to welcome you to-day to an institution which can awaken in Vermont doctors only feelings of justifiable pride.

It is not so much, though, in the institution and the people in whose behalf I greet you that I find satisfaction as it is in the men of the particular profession whom I have the honor of greeting. I take peculiar pleasure in welcoming personally and officially the doctors of Vermont to our city and to their university.

Members of the Vermont State Medical Society I rejoice to welcome you because I sincerely believe that the profession of medicine is the most unselfish and patriotic calling in America to-day. Physicians are the only professional workers of whom I have knowledge that are working against their own financial interests by their efforts to promote conditions which will make their own employment unnecessary.

We need a new definition of patriotism. It would hardly be correct to say that the term has been much abused. It is certainly true that it has been given too restricted a meaning. Literally translated patriotism means devotion to fatherland. It is loyalty to country. Its application, however, has been limited to loyalty expressed on the battlefield or in the realm of statecraft. No citizen properly grateful for his heritage of freedom would wish to pluck one laurel from the soldier's brow. We would not rob the statesman of any well-earned distinction. If patriotism, though, means devotion to the na-

tional welfare it will manifest itself in concern for the individuals who compose the nation. It will be conceded that the intangible institution called the government exists only for the sake of the governed. There would be no need of the trappings of war or of legislative halls for their own sakes. These exist only for the service of the people. The unit of humanity is a person. Does it not then follow logically that he who contributes to the salvation of the individual man or woman or child is by that much contributing to the welfare of humanity, and is such an one not to the full extent of the service thus rendered to his fellowman, in the best sense of the word a patriot?

Surely a profession devoted to the alleviation of physical suffering among the individual human units of the nation is increasing the general efficiency of an entire citizenship and such a profession is therefore, in the best sense of the word, a patriotic profession. Patriotism again means self-denial for the general good and by that token the medical profession is a patriotic body.

Lord Nelson has been immortalized in art, in oratory and poetry as the great naval hero of the late eighteenth century. Sir Arthur Wellesley, the Duke of Wellington, is held in grateful memory by England as the greatest soldier of the early nineteenth century. Without wishing to detract one iota from the just fame guaranteed to the hero of Trafalgar or to the victor of Waterloo, I dare to believe that there was an English contemporary of these heroes, whose body has not found a resting place among the immortals of England in the crypt of St. Paul's Cathedral who, measured by the value of his service to humanity, was even a greater patriot than the great admiral or the great general.

That humble country physician, giving himself unselfishly to the service of his fellow man as he rode and walked on his mission of relief in the vale of Gloucestershire, will not have his name heralded to the centuries as the one who raised the signal "England expects every man to do his duty." He will not be handed down to posterity as the savior of European integrity who unflinchingly declared "My plan is to hold my ground to the last man." Nevertheless, all the generations of the future, forever saved from the loathsome terror of smallpox, will by their immunity guaranteed through vaccination constitute a living monument to the memory of one

whose name they may not pronounce familiarly as they do the names of Nelson and Wellington. Cow-pox is a humble term, but its establishment as a safeguard against one of the vilest and deadliest of diseases after sixteen years of patient, painstaking investigation should guarantee in eternal gratitude the title of patriot to Doctor Edward Jenner.

Hydrophobia may not be responsible for so many fatalities as are occasioned by other influences but the experiments which have resulted in making a way of escape from its consequences have added everlasting lustre to the glory of the French Republic in the brilliant name of Louis Pasteur.

Some years ago I was being driven by a liveryman through a farming district in the vicinage of the village of Storm Lake in the State of Iowa. Passing by a particular farm, my attention was attracted to three tomb-stones—marble shafts that were prominent in the well-kept and otherwise thoroughly conventional front yard. The gruesome incongruity of the arrangement so aroused my curiosity that I inquired of my driver why any man had chosen to build his home in a graveyard. He answered that it was not that way at all. On the contrary he informed me that the graves had been placed there by necessity after the building of the home. Then he related how some years before an epidemic of diphtheria had swept on the wings of a death angel through that community. The home in question was occupied by a respected young farmer who lived there with his wife and two children. The children were stricken simultaneously with the dread disease. The mother who began her ministrations at the bedsides of the little ones, herself very soon contracted the diphtheria, and the strong bodied father watched sleeplessly night and day by his loved ones. It was all to no avail. Within a few hours of each other his entire family was wiped out. The overworked doctor of the country-side carried the sad word to the people of the locality but fellow feeling though strong, was not sufficient to bring a volunteer willing to imperil the safety of his own family to minister to the grief-stricken husband and father. One neighbor, upon the earnest appeal of the good physician, drove to the village and procured three coffins. Enclosed in their boxes he dropped them over the fence before the house of his bereaved friend and then in great fear whipped up to get quickly

away from possible infection. The stalwart young farmer of a few days before, now bent as by years of pain, dragged himself out into the front yard and there alone dug the graves of his own dead. A little later, after he had covered their bodies with the earth, he read a passage of scripture and offered a heart-breaking prayer. Then the man whom the toll of a then unconquered malady had compelled to serve as nurse, undertaker and priest walked into the awful solitude of his home to live his life of loneliness.

The impression made by that recital called back to memory two experiences in my own childhood when I had suffered with diphtheria and was saved as by a miracle through the devotion of the family doctor and the unwearying vigil of my mother, while dozens of children in the community were gathered in by the "grim reaper." Then I remembered vividly a few years later when, as a village school master we had for many days only five or six pupils to a room and how for week after week we took down from the school-house the emblems of mourning and the half-masted flag only to put them back again to mark the passing of another child and yet others and others who had laid aside their books forever.

It was in 1896 that I had the experience and the memories occasioned by that ride in rural Iowa. The impressions were so overwhelming that I cried aloud in agony of sympathy for helpless childhood and sorrowing parenthood "O, my God! Why can we not find some means to stop the ravages of this malignant plague?" That prayer, though I did not know it was even then finding its answer. For years Doctor Emil Von Behring had been working patiently in his laboratory at Halle and Doctor Pierre Roux had not spared himself in Paris. The former was able to announce definite results in 1894 and both these men were able to assure the profession of medicine that a certain cure had been found upon which medical practice might absolutely rely. Diphtheria no longer stalks through the land an unspeakable terror decimating communities and destroying happiness; and in the name of emancipated childhood, in the name of a reassured fatherhood and motherhood I venture to declare that mankind has never known a greater benefactor than the originator of anti-toxin.

Jenner and Pasteur and Von Behring and Roux are outstanding names in your profession, but the thousands of unknown heroes—the coun-

try doctors, the family physicians who with no hope of fame or distinction are giving themselves up in unselfish service to humanity are patriots worthy of the fullest measure of gratitude a grateful people can bestow.

If our young men, students of medicine could only know the love and esteem awaiting the general practitioner, I feel sure that fewer of them would have their eyes so firmly set toward surgery or other lines of special practice. With what genuine love and confidence the faithful and efficient family doctor is regarded by his patrons! His is a reward of satisfaction in living and serving for which all the dazzling fame the world has to offer can not begin to compensate.

I speak, of course, as a layman but I know with what affectionate reliance our doctor has always been regarded in the home. There rises up before me now, in loving memory, the splendid figure of professional and personal devotion whom in boyhood days I delighted to call "my doctor." To my boyish mind he was one of the greatest and best souls of earth. How clearly I recall his visits twice a day to my home when as a lad of thirteen I was passing through the early stages of typhoid fever! I can see him standing with my father and mother by the bed giving careful directions as to my care and treatment. One day while he stood there he seemed slowly to fade away in the darkness. When I awoke they told me three weeks had passed but the doctor was still standing there. How happy he looked and how encouragingly he spoke, saying I would soon be ready for a good beef-steak and a game of ball. My mother's eyes were brimming with tears of joy and my father was holding my hand tenderly. I was willing to endure the broths and gruels a little while longer; I was content to begin by sitting up a few minutes at a time and then return to the bed because I believed the doctor and I knew that later the beef-steak and the ball-game would surely come. A few weeks later when I walked out on the streets for the first time, according to the instructions of my father, I hunted the doctor out to thank him for what he had done for me and will I ever forget the rapture of that moment when he put his arm around me and said with a smile of beatific satisfaction on his face "Well, my boy, a few weeks ago I thought for some days I should never see you on these streets again but it's worth all it cost in anxiety and loss of sleep to know you're well at last."

Never so long as life lasts, will I cease to be grateful to that self-denying man. My father paid his bill more than cheerfully and I remember of him telling me what the amount was and of his amazement that it was so small. But if his charges had been many fold more, they would not have met my sense of indebtedness to him. He is an old man now but whenever I make a pilgrimage to my native town I always hunt him out first of all to render thankful homage at his shrine.

Then I only need to hark back to a few years ago when into my own home a strange ailment walked one morning and without warning settled itself upon one of our children. It was another doctor that came—a quiet, thoughtful man but he staid by with patience that knew no faltering until death, which was knocking, had been ordered away from the door. So there's another man now to whom I owe a debt of lasting love and unpayable gratitude.

My feelings, of course, are very different from those of these two doctors because our points of view are different but I know by their own fervent assurances that they have found their largest compensation in accomplishment and in our loving appreciation.

If it be true that the supreme joy of living is found in human service, then the faithful efficient doctor must be supremely joyful all the while.

In the last instance I am glad to welcome the Vermont Medical Society because it represents a profession of possibilities. Medical science is still in swaddling bands. You have, as yet, barely passed beyond the borderland of your possibilities. You have only touched the rim of the world of medical achievement. You need no warning against complacent contentment with past and present accomplishment. You have just ground for pride in the forward march toward the conquest of bodily suffering in which the pioneers of medicine and surgery have been leading, and yet you know that there is coming the dawn of a better physical day for humanity. This is your incentive to study and proficiency. This is your stimulus of hope when you attend a convention or pick up a medical journal.

It is no confession of antiquity when I tell you I can remember when measles and chicken-pox and whooping cough and mumps were regarded as necessary incidents of childhood. The family doctor to whom I paid tribute awhile

ago was responsible for no such notion but the belief was so prevalent among intelligent people that they encouraged early exposure to these ailments so that their children might be over with them as soon as possible. I knew doctors of that age, who gave so much blue mass and quinine and calomel and castor-oil that many promising people were maimed for life.

Truly we live in a better age. It is worth while to be alive now and when I saw Doctor Albee last spring performing those wonderful operations of bone transplanting to give people stronger backs for life's burdens I asked myself "What next?" No one can prophecy just what the next step will be but we know that the medical profession will never beat retreat. The millenium day of health is due to arrive sometime. It will come because the men of medicine have dedicated their lives to work and because they have chosen as a profession to give selfish interests the secondary place. I never knew what genuine hard work meant until I came to the University of Vermont and had an opportunity to observe the way in which the professional men of the Faculty of Medicine employ their time. Speaking for myself I may say in all honesty, I think, that I have never been known as an idle man in my particular field of labor but since I have come to watch these teachings and practicing doctors go about their day's work, I have been reluctantly forced to the conclusion that I belong to the leisure class. I once thought that the academic professors were overworked men but I know now that I was mistaken. When I see men teaching from ten to fifteen hours a week in addition to the busy practice of their profession; when I go to the hospital amphitheatre at eight o'clock in the morning and find them with their students at clinics before the rest of the world is fairly awake; when I see them coming to their lectures, as I often do, after twenty-four to forty-eight hours without sleep and yet alert and ready for their classes; when I see them doing all this without neglect of the constant study necessary to keep abreast of the times; when I observe them also fulfilling their civic obligations and preparing addresses for medical associations while attempting to meet social obligations and discharge their family duties—when I observe all this, I know that other vocations have not yet passed the kindergarten grade in the school of real work.

How can a profession of this character fail ultimately of the highest accomplishment? It will never be necessary to adopt the Chinese method of remuneration for American doctors. Over there they pay their physicians for keeping them well and the pay stops while the patron is sick. The medical profession in our country has chosen to make the promotion of health its motive for service. The doctors are leading in the movements for improved sanitation and in the fight on disease germs. Sometimes I wonder what will become of their personal material interests when we greet the day dawn of perfect universal health. When doctors are employed as experts in prophylactics, when they give themselves up to means of prevention rather than of cure their advice and activity as experts in the promotion of health will make the profession more remunerative and more agreeable than it is to-day. The day of the fulfillment of this prophecy will be the rich legacy bequeathed the later generations as the result of the privation and the consecration of those of you who toil to-day in the spirit of self-abnegation for the largest good of your own generation and for the perfection of posterity. Working in the spirit of such utter unselfishness, you exemplify the highest ideal of patriotism. Such dedication to the welfare of the human race will guarantee to the coming years a virility of manhood and a strength of womanhood that will send to the discard the superficial methods of the fanatical disciples of eugenics and the prurient advocates of sex hygiene. I rejoice to have the privilege of welcoming a body dedicated to such high purposes. I glory in the privilege of association with a profession of such achievement and such promise.

PROGRESS IN MEDICINE AND THE PUBLIC WELFARE.

BY

JOHN L. HEFFRON, M. D.,

Dean of College of Medicine, Syracuse University.

Mr. President, Members of the Vermont State Medical Society and Friends:

Your invitation to take part in the celebration of the centennial anniversary of the Vermont State Medical Society is a great honor and I

thank you for it. Being the third in a line of physicians whose combined service in the profession of medicine covers more than a century, it is natural that my interest in the history of the development of medicine on this continent should be deep and that my knowledge of it should have a certain personal quality.

We revere the stalwart men who devoted their lives to the care of the sick in the first third of the century that is past. With the limited opportunities which were theirs, they did a work that has not been surpassed in the later years. They left records of such accurate observations of the natural history of most of the severer diseases that have afflicted man, that they are treasured to-day as classics. With indefatigable industry and without any other guide than experimentation with remedies culled from nature's laboratory, they evolved cures for certain specific diseases that anticipated the modern theory of the cause of disease; cures which modern medicine can explain but cannot improve upon. To them and to the workers during the middle third of the century modern medicine owes the possibility of its present great advancement, a debt which is too little considered but which cannot be too highly appraised.

In discussing the subject chosen at the suggestion of your secretary, viz. Progress in Medicine and the Public Welfare, it will not be necessary to delve into the dim and misty past, when man recognized disease as an entity hostile to the individual and which physicians fought with such weapons as were at hand and often in the dark, or when plague and epidemics were considered visitations of the vengeance of an outraged deity to which man must bow in humble submission or avert with prayer and penance. Under such conditions and such times there was no possibility of thought of the public welfare. No! The message which I bring this evening could not have been uttered many years ago. The dim foretelling of what is now demonstrated can be traced back in the centuries, but all the fundamental facts upon which modern hygiene and preventive medicine are based, have been revealed by the efforts of patient men working intelligently upon the mysteries of nature during the past forty years. All but one of the marvellous discoveries which are so intimately associated with the public welfare have been made within the memory of every person here who is sixty years old.

It was in 1858 that Pasteur demonstrated that all fermentation was due to the development of living microscopic plants in liquids capable of undergoing fermentation.

This astounded the world and precipitated an era of debate which waged until concurrence with his statement upon the impossibility of spontaneous generation became general in 1862. What came of it was even more significant. This discovery suggested to that great mind the possible relation of micro-organisms to disease, and he began extended investigations, first simple, then more and more complex, until he gathered abundant evidence that there was a direct relation between various bacteria and certain diseases. Lister, the English surgeon and earnest student was impressed with the momentous possibilities of this relationship and he took up the study of bacteria in connection with the suppuration of wounds and published his first work on the relation of micro-organisms to suppuration in 1867. His studies were advanced by many workers and were firmly established as facts and made a basis for surgical technique in 1881, and modern antiseptic surgery was born. What a boon to man that demonstration has been is beyond compute. Those who have knowledge of the frightful results attending operations in war and in peace previous to the days of aseptic surgery and compare them with the conditions of surgery to-day can but marvel at the change. To-day the surgeon operates on the most vital and delicate organs of the body without fear or hesitation, when previous to 1881 any such surgical procedure, however skillfully done, would have meant inevitable death.

In 1867 Pasteur appealed to the government of France for a laboratory in which he might study the ultimate cause of acute infectious diseases. Similar work was begun in every civilized country on the globe. Many valuable fundamental facts were established, but it was not until 1881 that Koch, the German scientist, electrified the world by demonstrating that he had discovered the cause of tuberculosis. His demonstration was complete and it was made in such a clear and scientific way that it has been accepted as the one which must be followed in proving that any micro-organism is the cause of a particular disease. Koch's law is, that to prove that a micro-organism is the cause of a disease, one must first isolate the organism,

second, implant it in a susceptible animal, third, observe that it reproduces the same diseased condition and, fourth, isolate from the infected animal the germ identical with one originally implanted. It seems so simple now. Wheat planted in the soil must germinate, grow and produce wheat. That's Nature's law. Koch utilized it and applied it to microscopic living things and nature has proved true.

The awakening of the world of science following this demonstration was tremendous. This method of experimentation was applied to the study of all diseases that for ages had been known to be communicable, and one after the other the specific cause of the long list of infectious and communicable diseases was announced.

In the search for these microscopic germs some disappointments have been met and overcome. One of the latest and most significant discoveries has been that by Flexner of the Rockefeller Institute of the cause of infantile paralysis. The disease was known to be communicable but the micro-organism was so small that a lens of the highest power did not reveal it. But by using a filtrate from the spinal cord taken from a child who had perished of the disease the identical disease was reproduced in monkeys, and from these experimented animals an infective filtrate was secured which was capable of producing the same disease in other animals inoculated with it. Thus man's powers of investigation are not limited even by the microscope, though Nagouchi this summer has announced the identification of the bacteria.

To-day the specific cause of but few of the infectious and transmissible diseases are not accurately described and classified. We are not yet certain of the infectious organisms in smallpox, scarlet fever and measles, and they are about the only ones that still baffle the scientist. But we know all about these diseases except their cause. We are in possession of knowledge enough about them to make it possible to avoid them as effectively as it is to protect against those diseases in which our knowledge is complete.

This statement leads us directly to the second element in problems of the prevention of disease. Given the causative germs, how are they disseminated? We can not prevent the spread of diseases unless we know the method of their propagation. The elucidation of this question is still proceeding, but we have already learned some

curious and interesting, though very practical, facts, and probably all of the most important factors in this problem are known.

The air has always been under suspicion, particularly night air. A so-called "miasm," or a gaseous emanation from marshy land that mingled with the air was considered the cause of all the malarial fevers; dampness of the air, the cause of acute rheumatic fever; pollution of the air by animal refuse, the cause of typhoid fever, some influence from the stars penetrating through the air, influenza hence its name and many others that we will not stop to enumerate. Our ancestors in the south shut their houses tight at night to keep disease out and our ancestors in the north shut their houses tight day and night to keep warmth in. This inheritance is still upon us and shall linger long, for such is the law of nature. The parasite of malaria has long been known. There are three distinct parasites which enter the blood cells, multiply at an exceedingly rapid rate and when mature rupture the cells which have been their hosts. Billions of these parasites are thus set free in the blood stream at one time and the typical chill and fever follow, and the extreme anemia, or bloodlessness, is accounted for. Malaria has been the most prevalent pest and danger of tropical countries. Millions have died of it and many more have had their energies so sapped that they have been a burden upon their families and have been unproductive members of the community. For centuries this disease was supposed to be the inevitable accompaniment of marshy lands in warm climates.

In 1899 Ross completed his studies on the relation of the spread of malaria to mosquitoes and he proved that one particular species, the anophiles, is the necessary intermediate host in the development of this plasmodium. This mosquito bites one sick with malaria, the germs enter her stomach, for here "the female is deadlier than the male." After an incubation of ten to twelve days the germ laden virus enters the proboscis or stinger of the mosquito, and the next person stung by this mosquito has injected into his blood the germ of the particular variety of malaria the mosquito had prepared. The air has nothing to do with it except to fan the wings of the deadly insect. Moisture has this to do with it. It is the necessary breeding place of mosquitoes, for they are hatched only in water.

Yellow fever has decimated the earth. When our government became interested in Cuba and in the Panama canal zone Dr. Walter Reed and his fellow officers undertook to solve the yellow fever problem. After laborious research and a research demanding the lives of men who volunteered for experimentation, it became established that yellow fever was distributed by still another mosquito, the *stegomyia fasciata*, and that without this mosquito to carry the spores of the yellow fever germ through their period of incubation there could be no spread of yellow fever.

The plague in history is the worst recorded scourge of man. In 1334 the plague killed one-third of the entire population of Europe! And again and again both before that time and since it has ravaged the earth. There are three forms of the plague—the bubonic, so-called because it first manifests itself in the glands in the groin; the pneumonic form, in which the lungs are destroyed, and the septicæmic, or black death, in which the blood is attacked and the man literally rots to death. Rats, marmots and ground squirrels are the common victims of this plague and in every epidemic they have been attacked first. It is spread to man by the fleas which infest the rats and which convey the germs to everyone they bite and in no other way except by personal contact.

We have admired the brilliancy of Flexner who has demonstrated the cause of infantile paralysis. It is a disease common to domestic animals. It now seems probable that insects, as well as contact, can convey the deadly germs, and the common stable fly is now under severe cross-examination to determine if he be the only insect that is able to convey this disease to man.

Epidemics of cholera are noted throughout the history of civilization. It is present in some part of the earth most of the time. Unhindered, it travels along the public highways of nations and spreads from port to port and from city to city and into rural districts taking its toll of death from fifty percent of those attacked.

Typhoid fever is an omnipresent contagious disease. Throughout the centuries it has exacted the death penalty from an enormous army of men and women in the most productive period of their lives and it has entailed upon twice as many the double burden of loss of time and of the expense of care throughout a tedious illness. In these two diseases the infectious principle is

poured out in the discharges from the body. In order that one may have typhoid fever or cholera he must get into his digestive organs the specific germs of the disease. Drinking water has been the most common means by which this infection is disseminated. A water supply, whether municipal or private or your own well or a sparkling spring which is not perfectly protected from drainage from polluted areas is certain to become infected with the germs of these diseases and those drinking this water are their frequent victims. Fresh vegetables, milk cans and culinary utensils rinsed with polluted water are an added source of danger. Dust from soil polluted with these discharges can infect the food. In the Boer war it was demonstrated that the domestic fly carried the infectious particles from sinks to food. The same fly has been proven to be able to carry other infections residing in discharges as is the case in diphtheria, scarlet fever, tuberculosis and suppurating diseases. The domestic fly, instead of being the scavenger he was once considered to be is an active and dangerous menace to the health of a community.

Aside from these specific instances in which disease can be transmitted only through the agency of various insects or through the taking of infected food supplies, contact with those sick of a contagious disease is necessary for exposure. The domestic diseases, tuberculosis, pneumonia, diphtheria, scarlet fever, measles, the venereal diseases and many more, are pure contact diseases. To some, like tuberculosis, there is a greater general susceptibility. In all there are emanations from the body in sputum, purulent secretions, nasal discharges, or from the skin with which one must come into intimate contact to acquire the disease.

Pasteur said near the close of his useful career, "I foresee a time when man shall be able to rid the earth of all infectious diseases." That time has arrived. By the rigid application of rules logically deduced from the facts here briefly noted, the United States Government has changed the Panama canal zone from a region of death under old conditions to a locality as healthful as your own beautiful city. The death rate under de Lesseps of at least 100 per 1,000 has been reduced to 14 in 1911. Dr. Gorgas to whom has been intrusted this mighty work, and who has so accomplished it that any other nation would have heaped upon him honor and riches,

says, "I dare to predict that after the lapse of a period equal to that which now separates the year 1909 from the Norman Conquest of England, localities in the tropics will be the center of as powerful and as cultured a white civilization as any that will exist in temperate zones."

This transformation has been wrought by destroying the accessible breeding places of mosquitoes and by screening all houses, thus destroying or shutting off from man the insect host necessary for the incubation stage in malaria and in yellow fever. There is now no more yellow fever! Malaria has been diminished almost to the vanishing point. Every community can do the same, but it requires an enlightened public opinion to compel this to be done, and it requires the most rigid enforcement of every detail in precautionary measures to insure such a result.

In San Francisco in 1904 the bubonic plague broke out. Ninety per cent of those attacked died. San Francisco with the aid of medical officers from the United States service stopped the plague. How? By killing all the rats and mice and the ground squirrels. That city expended hundreds of thousands of dollars in this war of extermination of rodents. Every city should encourage the extermination of vermin and thus prevent the possibility of plague.

We need never to know more about the way to prevent typhoid fever and cholera. Our knowledge is perfect. The outbreak of these diseases in any city or town is a communal disgrace. The control of water sheds, the enforcement of rigid rules for the safe disposal of human discharges and the protection of food supplies from dust and flies will absolutely and forever make impossible the development not only of these diseases but of dysentery, cholera morbus and the summer disorders of infants.

In each of the diseases spread by contact alone it is possible for any thoroughly posted physician to assure any family in which such a case is diagnosed that there shall not develop another case of the same kind from exposure to the sick one, provided he be given an isolated room, a trustworthy nurse and perfect obedience to the directions he shall give. If we fail to utilize measures known to be effective for the protection of ourselves, our families and our neighbors, it is our own cold blooded indifference and daring that are to blame. These things have been, our fathers have been used to them, and, though our

intellect be persuaded of the truthfulness of modern scientific demonstrations, our wills are not yet made firm enough to say that this disgraceful neglect shall stop once and for all time.

But science has gone further than to show that these diseases can be prevented by destroying vermin and noxious insects, by guarding against the contamination of food and drink and by protecting the ports of entry in the human body from harboring disease producing bacteria. It had long been observed that in every epidemic, however terrible and deadly, some proportion of the population escaped infection and some others survived the disease. The next question then was that of immunity. Why are some persons naturally immune against many of the infectious diseases and walk unharmed in the midst of epidemics? Why do some persons sustain only a light infection and quickly recover while others succumb? This question is too technical to discuss before a non-medical audience. It must suffice to say that scientists have unravelled this mystery and that now we know not only what natural immunity is but that immunity from certain diseases can be conferred upon men by the use of the products obtained from the cultivation of the infectious bacteria or by the modifications of the bacteria themselves.

The first demonstration of this fact was made long before the establishment of the germ theory of disease. The English physician Jenner, when a medical student, observed that in a certain dairy region the milkmaids who became inoculated with cow-pox were immune against smallpox. Upon the completion of his studies he settled in a dairy farming community and began systematic observations and experiments upon the relation of cow-pox to the smallpox. In 1798 he published the results of his studies and aroused universal attention by the statement that inoculation with cow-pox absolutely prevented the future development of smallpox. To appreciate what smallpox meant at that time, let me give you a few facts. In that century smallpox was more common than measles is to-day. Macauley said, "Smallpox was always present, filling church yards with corpses, tormenting with constant fear all whom it had not yet stricken, leaving in those whose lives it spoiled the hideous traces of its power, transforming the babe into a changeling at which the mother shuddered, and making the eye and cheek of the betrothed maiden badges or horror to the lover." It is estimated that in

the eighteenth century sixty millions of the inhabitants of Europe died of this foul disease. Vaccination stopped it and to-day the existence of a single case of smallpox in any community is a disgrace. A thoroughly vaccinated person can not take smallpox. The cause of a crusade against vaccination is to be found in two reasons. First, there has not been proper inspection of vaccine lymph, and, secondly, men have performed this delicate operation without skill. Pure lymph in the hands of a skilled physician never gives but one result—the production of the protecting disease now called vaccinea. The German government attends to both these causes of failure and compels universal and repeated vaccination. In a recent year when I had occasion to look up this question, the great empire of Germany reported only fifteen cases of smallpox. In the same year New York State reported fifteen hundred. Our carelessness and criminal neglect of enforcing universal vaccination shall cost us dear. Anyone who contracts smallpox to-day gets just exactly what he deserves.

In 1896 a vaccine effective against typhoid fever was produced simultaneously in France and in Germany. The English commenced its use in the army and navy in 1908, and reduced the mortality due to typhoid most markedly. In the Spanish-American war 10,000 troops were mobilized by the United States Government. There were 1,500 cases of typhoid fever and 345 deaths. The government began to use vaccine against typhoid fever in 1910. Fifteen thousand troops were mobilized along the Mexican frontier under practically identical physical conditions, and during the same length of time but four cases of typhoid fever were reported and one died. None of these had received the vaccine. We are so far from protection against the dissemination of typhoid fever to-day that it is sound advice to take the vaccine treatment against typhoid before you go away on your summer vacation. It will protect you for about one year.

In 1894 the diphtheria antitoxin was discovered. I shudder when I recall our experience with that dread disease previous to that time. This antitoxin is curative as well as protecting. It can be asserted unhesitatingly that no death need occur from diphtheria if the antitoxin is used early and in sufficient dose. Anyone exposed to the disease can be perfectly protected against contracting the disease from that

exposure by the use of antitoxin. Its effect is not so lasting and a single vaccination ought not to be depended upon beyond the limits of the prevailing epidemic. Most of you know by sad experience how much of hope there is in this fact.

The antitoxin of tetanus—lockjaw—protects one who has been wounded by a blunt and infected instrument from the development of the disease. The careful physician never neglects to give this antitoxin to everyone coming to him with a wound on the Fourth of July or when injured by a stab or in a fall producing a wound by an object long exposed, for so commonly is this given that it is almost always present. Lockjaw is almost always fatal, and if the disease develops the antitoxin is of no avail.

The specific cause of gonorrhea has long been known. It has become permissible to discuss openly the relation of this bacteria to the welfare of the public. It is a cause of ninety percent of the cases of blindness in infants, of seventy-five percent of the diseases of the pelvic organs of women that demand surgical relief and of most of the cases of sterility in men. Physicians know its prophylaxis and its cure. It can be controlled just so soon as public opinion shall be formulated upon the subject, an opinion which shall be educative and which shall compel one who develops this disease to seek an accurate diagnosis and a complete cure, and to be under some effective control until pronounced bacteriologically clean. Legislation cannot bring this about but an alert and conscientious medical profession backed by public opinion could come near stamping out this disease in a single generation. We cannot have a clean and vigorous race of men and women until this and that other venereal peril, syphilis, are controlled.

It is unnecessary to dilate farther upon the evidence that all infectious and contagious diseases are preventable. The specialty in the profession of medicine in the future which shall allure the brightest minds and command the greatest executive ability shall be the specialty of Hygiene and Preventive Medicine. The day is near when the people shall demand that the first conservation of natural resources shall be the conservation of human health, the greatest of all assets of a nation. When that day comes the people will insist that the earnest young men desirous of devoting their lives to save others

from disease and death shall be assured of a comfortable living for their families and that they shall not be the playthings of municipal or state or national politicians.

There is one other phase of this subject that I desire to mention. If you have followed this summary of facts you have noted that all these demonstrations have been accomplished by experimentation on the lower animals. Without these animal investigations it would have been impossible to arrive at the facts. It is not permitted to scientists to use human beings for such experiments, though the whole history of ancient medicine is but the history of experiments by well meaning physicians upon the sick and the injured and though it is recorded that the deaths during the middle ages from the trying out of medical theories exceeded those in all the wars of that time. However, in the case of yellow fever and malaria, to which man alone is known to be susceptible, volunteers, often the experimenters themselves, allowed infected mosquitos to bite them and thus gave proof of the transmission of the disease by this means, while others slept in the soiled beds in which men had died of the disease and by their freedom from attack demonstrated that the old notion that the disease was spread by contact with clothing soiled by the fomites was not true. The world knows nothing of these martyrdoms, and except in the memory of their brother physicians the names of those who deliberately risked life and often lost it that mankind might know what was the truth, are unhonored and unsung. But a host of maudlin men and women rush into print daily in defense of the poor, dear animals whose lives are offered up as a sacrifice upon the altars of science for the deliverance of man from disease. One life such as Dr. Lazear's sacrificed in his experiment on himself with yellow fever, is worth more than the whole race of dogs and cats! I have lived through this period of experimentation and I have witnessed the work in different cities and countries and I assure you that I never saw an animal treated with less kindness than is shown to any man, woman or child who requires a surgical operation.

Yet year after year physicians have to defend their liberty to try to advance human knowledge concerning disease before every legislature in the United States!

I have kept you too long, but I have said so little that could be said upon this subject. Only

the most familiar diseases have been touched upon and they only in the most superficial way.

These marvels of medicine so rapidly and so imperfectly reviewed are intensely dramatic and keep the center of the stage. But there is another phase of medical progress that is even more significant. The medical aspect of sociological conditions could not have been studied in an earlier period. The knowledge which has resulted from the study of the ultimate causes of disease and of the means to control and prevent them was an essential preliminary to the study of social pathology. The appalling death rate of infants does not depend alone upon food that is germ laden though that is an important factor in the problem. The great physician who has just retired from the presidency of the A. M. A., Doctor Jacobi, has repeatedly called attention to the fact that we must go back of the period of birth and protect the mothers who are with young and safeguard them and see to it that they have only scientific care through the period of delivery and convalescence therefrom, if we would begin aright to prevent needless mortality amongst infants. This problem is broader even than that, for to get to the very foundations it is necessary to provide that children shall be born of physically healthful parents. This great question is a medical one. The very fact that ways and means for solving it are being freely discussed by the general public is a hopeful sign of the times. That the genius of the medical profession shall be able to solve it in the future I have no shadow of doubt. If we can have the cooperation of individuals and can have and use wisely authority similar to that wielded by Dr. Gorgas and Col. Goethals in the Panama Canal Zone there is no reason why it shall not be possible to eliminate the birth of the physically and morally unfit.

The medical inspection of public schools weeds out a few cases of communicable diseases, but when it is fully and scientifically done, it discovers in malformations of eyes or ears, in choked conditions of the upper respiratory tract and in evidences of malnutrition the causes of intellectual backwardness in many pupils that are easily amenable to relief. The study of the high grade of the mentally defectives has but just begun. It seems reasonable to expect that progress in this field shall have the effect of revealing the beginnings of the criminal mind and thus open a way for preventing such a de-

velopment. The physical bases for crime are many and it must be to the profession of medicine that we must look for their elucidation and for suggestions for their correction. The progress in the management of the insane has been enormous. Insanity is now correctly classified as a mental disease and is now studied in all of its bearings. The unfortunate ones who develop such a disease are no longer branded and herded like cattle.

The causes of insanity are many and many of them can be controlled. If we can eliminate the chronic manifestations of syphilis we shall have gone far to prevent the worst cases of insanity. The present physical and mental unrest amongst women that is now so dominantly expressed in many ways must be studied from the standpoint of the pathologist and the psychiatrist. If it be true as one of the prominent suffragists asserts that the intellectual activity of her type has already produced a race of neuters that itself is most significant.

The study of the medical aspect of occupations has already accomplished great good. Our great businesses have developed gradually and have used men as tools and with no more regard for them than for tools. This is largely a matter of accident and not of design. But modern medical science has opened blind eyes and unstopped deaf ears and is fast bringing it about that in every occupation where many men are employed the most scrupulous care must be exercised to protect the health of the men in the factories, in the mines, in the fields and in that most neglected spot, the office. The opening sentence in our Declaration of Independence which declares that "All men are created free and equal," was not formulated upon the accurate observations of those medical men who had the honor of signing that document. Men are not created free and equal. But modern medical science insists that the mothers of the race and the children shall be protected during their period of stress and of growth and that every one shall have protection to life, to limb, and to health in whatever occupation he shall elect to employ his energies. "People don't die of disease, they die because they are not permitted to live." This epigrammatic statement was made to me by one of our greatest pathologists in a conversation on this aspect of medicine. Progress in the study of the medical aspect of social conditions is the latest and the most significant phase

of progress in medicine that affects the public welfare. The light of the 20th Century has changed the fundamental conception of what disease is and of the highest function of the physician. It is his to instruct in the ways of right living, to restore the sick to health, to relieve suffering, and to comfort those who are beyond his skill to cure. But above these services lies his supreme duty. It is his to guard the health of the community, to prevent death from unnecessary diseases, and to protect from disease and injury all the workers of the world. To do this effectively he must have the confidence and the cooperation of the entire community.

"PITUITRIN."

BY

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Much has been said and written upon the subject of scientific efficiency in most all lines of business except as applied to the practice of medicine. Physicians will welcome any plan of treatment that will contribute to the hastening of end results so long as it does not hazard the welfare of the patient. If it is possible to do the work in one or two hours that usually requires four, and occasionally twenty-four hours, it is but natural that a physician should grasp this opportunity.

When I look back over twenty-two years of practice and realize the unnecessary waste of time to myself and the patient in waiting on the tedious progress made in many cases of labor, it seems a pity that some agent similar to pituitrin was not available in obstetrical practice of years ago.

My purpose in writing this short paper is to direct the attention of every physician, who engages in obstetrical practice, to the importance of employing pituitary extract in properly indicated conditions.

The pituitary body is situated at the base of the brain, comprising two lobes, anterior and posterior, of which the anterior is the larger. The body is mushroom in shape and attached

by its stalk to the floor of the third ventricle. In dimensions it is about 12 mm. by 7 mm. by 5 mm.

The anterior lobe is dark in color, dense in consistency and appears to be an outgrowth from the primitive oral cavity and yields an extract which produces a lowering of the blood pressure.

The posterior lobe is apparently an outgrowth from the brain tissue itself and, although the physiology of the organ has not been definitely determined, it is supposed to control opposite functions from that of the anterior lobe. It is from this posterior lobe that pituitrin is produced. This active principle possesses the properties of an ecboic and oxytocic, increasing the blood pressure, lowering the pulse rate, and incidentally stimulates diuresis which seems to lend value as an oxytocic. Owing to its action upon the muscular coat of the artery in retracting the sheath of the blood vessel it is said to possess a distinct value as a hemostatic.

Although pituitrin is open to the objection that observers have not agreed upon the exact role it plays in a physiological sense, those who have had experience in its use firmly believe its use perfectly justifiable in those cases where labor is progressing slowly but otherwise everything is normal.

My experience with the drug is limited to eight cases.

Two cases where the pains had advanced to the beginning of the second stage then had ceased and at the time of the administration of one cc. of the pituitrin had been absent for several hours.

In each of these cases the drug produced a prompt reaction. Good bearing down pains coming on at intervals of five and six minutes and continuing until the third stage was completed, which occurred in about one-half hour.

The next four cases the pains were regular but lacked expulsive power and the os not much dilated.

In one case I administered 2 cc., and in the others 1 cc., always hypodermically, and in all cases a prompt reaction was obtained.

The pains increased in severity and duration, and labor was completed in all cases promptly, the longest time being 42 minutes from the administration of first dose of pituitrin until the ending of the labor.

Two of these latter patients were primiparae and no unusual lacerating of the soft parts was noted by the hurrying up process of pituitrin.

The seventh case was one of post-operative shock. Operation done to relieve persistent vomiting caused by adhesions around uterus from a previous laparotomy, crowding the fundus down behind the sacral promontory. Much oozing from omentum and uterine surface. Patient in very bad condition preceding operation and subsequent thereto.

Pituitrin, even when administered in heroic doses, had no appreciable effect, the patient dying 8 hours after operation.

The last case was one of post-partum hemorrhage, in which ergot hypodermically had no effect and which was relieved by 4 cc., of pituitrin injected in divided doses into both thighs. The uterus contracted firmly and remained firm.

In conclusion I might remark that in six months my viewpoint regarding pituitrin has changed from skepticism to enthusiasm.

It matters little whether the os is or is not dilated, the nagging pains are changed in from five to eight minutes to strong expulsive ones, and by its contractile and retractile powers over the uterine involuntary muscular fibres, the cervix is soon obliterated, the fetal head descends, and rotation and extension take place with neatness, accuracy and dispatch.

Although the pains are doubled and quadrupled in frequency, severity and duration by its use, no untoward effect has been noticed upon the child. However, all of my cases suffered more than usual from after-pains for 36 hours subsequent to its administration.

This drug is valuable not only by conserving much energy and strength to the patient, but also let us consider the satisfaction it affords the physician, who when called to a slow case "Hates to go and hates to stay."

EYE ACCIDENTS IN GOLF.

The ancient and honorable game of golf is not without its misfortunes to the eyes of its devotees. Many people have lost eyes because like Lot's wife they looked back. The familiar cry of "Fore" has been the signal for ocular destruction many times. When this imperative vocal signal reverberates over the golf field, the first

impulse of the average player is to look behind, and this is a fatal mistake, for every once in a while, a ball strikes the eye, and it usually comes with so much force as to destroy the eye or seriously damage it. Vision, at least, is almost always lost, and the removal of the eyeball itself is frequently necessary to prevent a sympathetic and fatal disease of the other eye. The lesson to be learned is not to look back on the golf field. When "Fore" is called, look the other way, and lean forward, as it is better to be hit on any other part of the body than on the head. Even when "Fore" is not called, it is better not to look back, except when necessary, as balls are always liable to be flying (especially on small and crowded fields) and an eye injury is always among the possibilities.

Another, but less frequent, source of eye accidents on the golf field is the reckless and inconsiderate swinging of clubs in making practice shots when near other players. This is a common practice and should be sharply discouraged, as some fatal accidents have occurred by a crushing blow on the head by a golf stick. Eyes have been seriously and totally injured by the same custom. If players wish to make practice strokes they should do so in remote places where they will not injure other people.

Eyes are also frequently injured by being struck with foreign bodies, such as sand, gravel, etc., flying off from the end of a club, as when a player endeavors to drive a ball from a sand pit with a niblick. This exasperating performance will frequently be followed by a shower of sand, gravel, etc., flying around the player's head, and eyes are often injured in this way. The injury is usually slight, but sometimes more serious consequences ensue, and eyes have been lost from the consequences of such accidents.

Within the last two or three years quite a number of serious accidents have occurred from the opening of golf balls to ascertain their contents. Most balls contain no fluid, but there are balls wherein will be found acids, held there under high pressure, so that when opened by a knife, hatchet or what not, the acid squirts out. Not infrequently, the eyes and face have been severely burned. The acid is supposed to give the ball greater resiliency and carrying power, but its use is dangerous. Do not cut open golf balls, to see what they are made of, or for any other reason.

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EDITORIAL.

Two notable gifts to medical science have been announced during the last month, one an addition of four million dollars to the endowment of Cornell Medical School given by Col. Oliver Hazard Payne and the other a gift of \$1,500,000 by the general education board to Johns Hopkins Hospital and Medical School. The increasing frequency of large gifts to the cause of medical education is a very encouraging tendency. These institutions in America have until very recently been obliged to be largely self supporting with the increased requirements of medical education. This has meant that they must give very efficient teaching or go out of existence. The latter fate has befallen many. The popularization of medical questions, the advance of preventive medicine and the brilliant work of the Rockefeller Institute for medical research have undoubtedly influenced these latest gifts. There can be no broader philanthropy than this of making possible research into the causes, means of preven-

tion and cure of the diseases which afflict all mankind.

The Cornell Medical School is equipped to follow the most enlightened methods of diagnosis and treatment, with the extension of opportunities for practical studies of diseases and injuries in hospital wards. The use to which the new funds at Johns Hopkins are to be put is not less significant.

It enables the professors in the departments of medicine, surgery, and the diseases of childhood to devote their whole time to their work. The General Education Board places, it says, "absolutely no restriction upon the freedom of any of these men," save that of accepting personal fees for their services inside or outside the hospital. The scientific clinicians, delivered from the exigencies of practice, may now devote themselves to the study of selected cases throughout their entire history.

The gift permits a notable extension of knowledge of "bedside" cases. This field of medicine has been neglected in this country, because busy consultants were engrossed in private practice. They could give little time and mental energy either to teaching or to keeping abreast with clinical research under skilled observers abroad. Yet pure scientists, who need care little about stipends and salaries, have been responsible for the remarkable advances in all fields of human effort during recent times. The princely gifts to medicine just recorded will place fresh companies of research workers above all need of material things, at posts where they may aid sick humanity in the present and in future generations.

Since our last issue the University of Vermont College of Medicine has begun its annual session, and it is an interesting fact that there

are twenty men in the freshman class, nearly twice the number in the entering class last year; and it is a still more interesting fact that there are twenty-five students in the pre-medical year, which will insure a freshman class next year of between thirty and forty.

It is exceedingly gratifying that the College of Medicine is recovering so quickly from the effects of raising the standard of requirement for preliminary education from a four years' high school course to one year in college. It is more gratifying in view of the fact that medical schools like Tufts in Boston, Albany Medical College and Medical schools in Baltimore and Philadelphia have admitted students this year from high school while the University of Vermont required one year in college. The large number of men in the first three classes in the University of Vermont College of Medicine, who could have been admitted to other Medical Schools without this additional year of college work, is a high tribute to the good name the College of Medicine has earned.

It may be of interest to our readers to know the standing the graduates of the University of Vermont College of Medicine have had in State Board examinations, as compared with some other medical schools of recognized high standing.

The fact that the graduates of the University of Vermont rank higher in these examinations before State Boards is *prima facie* evidence that the character of the teaching in the University of Vermont College of Medicine is of a high grade, and that the standard of education maintained is as high, or higher, than the standard maintained by medical schools like Harvard and Columbia.

Vermont can certainly take pride in the College of Medicine of the State University.

Following is the standing of graduates of 1912 of some of the well known medical schools,

based on the percentage of failures in State Board examinations taken during 1912 and published by the *Journal of the American Medical Association*:

Graduates of University of Vermont College of Medicine.—Percentage of failures, 3%.

Graduates of Rush (University of Chicago).—Percentage of failures, 2.2%.

Graduates of Johns Hopkins.—Percentage of failures, 3.1%.

Graduates of University of Pennsylvania.—Percentage of failures, 4.2%.

Graduates of Jefferson.—Percentage of failures, 4.6%.

Graduates of Tufts (Boston).—Percentage of failures, 4.9%.

Graduates of University and Bellevue Hospital Medical College.—6.5%.

Graduates of Columbia.—Percentage of failures, 8.8%.

Graduates Baltimore Medical.—Percentage of failures, 9.1%.

Graduates of Harvard.—Percentage of failures, 9.7%.

Graduates of Dartmouth.—Percentage of failures, 12.5%.

Graduates of Medico Chirurgical College (Philadelphia).—Percentage of failures 15%.

Graduates of Syracuse.—Percentage of failures, 15.4%.

Graduates of Long Island.—Percentage of failures, 23.7%.

Graduates of University of Buffalo.—Percentage of failures, 25.8%.

NEWS ITEMS.

A son was born November 5th to Dr. and Mrs. F. M. Rogers of Vergennes, Vt.

Announcement is made of the marriage of Dr. George A. Ferguson and Miss Agnes E.

McMahon November 5th at Burlington, Vt. Dr. Ferguson is a graduate of the University of Vermont in the class of 1912.

The general education board has given \$1,500,000 to Johns Hopkins Medical School to establish professorships of medicine, surgery and pediatrics. The terms of the gift require the men filling these positions to receive no fees from private or consultation practice.

The endowment fund of the Cornell Medical College has been increased \$4,000,000 by the gift of Col. Oliver Hazard Payne. This makes the sum of its endowment fund total \$7,000,000.

Dr. J. J. Powers, assistant at the Bangor State Hospital for the past five months has opened an office at Lebanon, N. H.

Dr. J. McBride of Lebanon, N. H., is now in Chicago, taking post graduate work on the ear, eye, nose and throat. His practice has been taken over by his brother, Dr. B. J. McBride who has been located for some years in New Brunswick.

Dr. J. Conrad Ross of New Bedford, Mass., was fined \$50 when he pleaded nolo contendere to a charge of having failed to report to the board of health a case of ophthalmia neonatorum which resulted in the loss of sight of one eye to a new-born babe. The prosecution was instigated by the Massachusetts Society for the Prevention of Cruelty to Children. Dr. Ross did not deny his negligence but appealed through his counsel for the minimum penalty. Counsel declared that Dr. Ross's offence was an oversight, as a report had been made out but he had forgotten to mail it.

The wife of Doctor Ezra A. Jones of Manchester, N. H., died Sept. 22 of cerebro-spinal meningitis.

Col. William C. Gorgas of Isthmus of Panama fame has just gone to South Africa to investigate the prevalence and method of control of grippe which is prevailing there with great mortality.

Miss Ellen Gleditsch, for five years a collaborator and associate of Mme. Curie in Paris while Mme. Curie was investigating radioactivity, has come to this country for the purpose of conducting experiments in radioactivity at Yale University. Miss Gleditsch is a Norwegian in-

vestigator in physical chemistry and was designated by the Government Commission of Sweden as one of the six Fellows sent to this country for advanced research work in American universities under the auspices of the American-Scandinavian Foundation, which foundation consists of a self-perpetuating Board of Trustees, incorporated in 1911, to hold in trust an endowment of \$600,000 created by the late Niels Poulson, of Brooklyn. Its purpose is to cultivate closer intellectual relations between the United States and the Scandinavian countries. It carries with it six fellowships, the holders of which are designated by Government Commissions in Norway and Sweden, and Miss Gleditsch is the first woman ever to receive an appointment to one of these fellowships.

The *American Medicine* Gold Medal for 1913 was awarded to Dr. M. J. Rosenau, of Harvard University as the American physician whose contribution to medicine during the year seemed most deserving of recognition.

It is with infinite satisfaction that we can announce that arrangements have been completed by which Dr. Charles E. Woodruff who has just retired as Lt. Col. of the U. S. Army Medical Department, has become associate editor of *American Medicine*. Dr. Woodruff has had a remarkable experience in this country and the Philippines. A brilliant writer and a thoughtful student of medical affairs, his pen will add much to the pages of *American Medicine*.

Surgeon C. H. Lavinder, of the United States Public Health Service, reported by telegraph on October 8, 1913, that dengue was prevalent in Savannah, Ga.; the number of cases of the disease was not known.

During the week ending September 11, 1913, there were reported in Roumania 401 new cases of cholera, with 165 deaths, making a total from the outbreak of the disease of 1,425 cases, with 623 deaths. In addition to this number 23 cases of cholera were reported on September 11th at Silistria among Greek and Turkish refugees.

At the annual meeting of the British Association for the Advancement of Science, held recently in Birmingham, England, the honorary degree of doctor of laws was conferred upon several foreign guests, among them being Doctor Arrhenius, director of the Nobel Institute for

Physics and Chemistry, at Stockholm; Madame Curie, director of the Physical Laboratory at the Sorbonne, Paris; Doctor Keibel, professor of anatomy in the University of Freiburg, Germany; Dr. H. A. Lorentz, professor of physics in the University of Leyden, and Dr. R. W. Wood, professor of experimental physics in the Johns Hopkins University, Baltimore.

A symposium on the education of the public in regard to cancer was presented at a meeting of the Eastern Medical Society, held on Friday evening, October 17th. Papers were read as follows: The Suspicion of Malignancy, by Dr. Howard Lilienthal; Cancer in Women, and the American Society for the Control of Cancer, by Dr. Le Roy Broun; Some Cancer Problems in Greater New York, by Frederick L. Hoffman, Esq., statistician of the Prudential Insurance Company of America. The subject was discussed by Dr. Willy Meyer, Dr. George E. Brewer, Dr. Herman J. Boldt, Dr. John A. Bodine, Dr. Louis J. Ladinski, and others. The meeting was open to the public and there was a good attendance.

The fourteenth annual meeting of the American Röntgen Ray Society was held in Boston on October 1st, 2nd, 3d, and 4th, under the presidency of Dr. H. K. Pancoast of Philadelphia. About one hundred physicians from the United States and Canada were present. An excellent programme was presented, an interesting feature being a symposium on the value of the X-ray in the diagnosis of diseases of the stomach and duodenum. Among those who contributed to the symposium were Dr. Lewis Gregory Cole, of New York, Dr. A. W. George, of Boston, Dr. A. W. Crane, of Kalamazoo, Mich., Dr. A. H. Pirie, of Montreal, Dr. G. E. Pfahler of Philadelphia, Dr. J. T. Case of Battle Creek, Mich., and Dr. F. H. Baetjer of Baltimore. Many of the papers were illustrated by lantern slides. Officers to serve for the ensuing year were elected as follows: President, Dr. Sidney Lange of Cincinnati; secretary, Dr. W. F. Manges of Philadelphia; treasurer, Dr. Leonard Rue of Buffalo.

On the recommendation of the Committee on the Award of the Hodgins Prize of \$1,500.00 for the best treatise "On the Relation of Atmospheric Air to Tuberculosis," which was offered by the Smithsonian Institution in connection with the International Congress on Tuberculosis

held in Washington in 1908, the Institution announces that the prize has been equally divided between Dr. Guy Hinsdale of Hot Springs, Virginia, for his paper on "Tuberculosis in Relation to Atmospheric Air," and Dr. S. Adolphus Knopf of New York City, for his treatise "On the Relation of Atmospheric Air to Tuberculosis."

The members of the committee on award were Dr. William H. Welch, Johns Hopkins University, Baltimore, Md., chairman; Dr. Hermann M. Biggs, New York City; Prof. W. M. Davis, Cambridge, Mass.; Dr. G. Dock, Washington University Medical School, St. Louis, Mo.; Dr. Simon Flexner, Rockefeller Institute for Medical Research, New York City; Dr. John S. Fulton, Baltimore, Md.; Brig. Gen. George M. Sternberg, U. S. A. (Retired), Washington, D. C.

Plans have been arranged whereby Temple University, Philadelphia, will have the largest hospital, not a government or municipal institution, in the United States. The dental college at Eighteenth and Buttonwood Streets will be moved to one of the other Temple University buildings and the buildings now occupied by the dental, pharmaceutical, and medical departments added to Garrettson Hospital, with one hundred and fifty-two private rooms, several large wards, and a large operating room. There will be built an entirely new hospital with one hundred and twenty-five private rooms, which in addition to Samaritan Hospital and the Garrettson Hospital, will give the medical students of Temple University unrivaled facilities for pursuing their studies. At Samaritan Hospital the State of Pennsylvania is now constructing a laboratory building, a memorial to the late Dr. Elmer E. Brown, for many years vice-president of the university.

The twenty-third annual meeting of the New York and New England Association of Railway Surgeons will be held at the Hotel Astor, New York, on Wednesday, October 22d, under the presidency of Dr. John W. Le Seur of Batavia, N. Y. There will be two sessions. At the morning session the annual address of the president will be delivered by Doctor Le Seur, and Mr. Ralph Peters, president of the Long Island Railroad, will deliver an address. In the afternoon Dr. Hugh H. Young of Baltimore, will deliver the address in surgery. In addition

to these addresses fifteen papers are listed on the programme. On Thursday, October 23d, two clinics will be held for the visiting surgeons; in the morning at the Polyclinic Hospital, and in the afternoon at the Post-Graduate Hospital. The officers of the association are: President, Dr. John W. Le Seur of Batavia, N. Y.; first vice-president, Dr. C. A. Pease of Burlington, Vt.; second vice-president, Dr. W. H. Marcy of Buffalo; corresponding secretary, Dr. George Chaffee of Brooklyn; recording secretary, Dr. J. H. Reid of Troy, N. Y.; treasurer, Dr. J. K. Stockwell of Oswego, N. Y.

Dr. Charles Sheldon of Madison was elected president of the State Medical Society of Wisconsin at the annual meeting held recently in Milwaukee. Other officers were elected as follows: Dr. C. A. Evans of Milwaukee, first vice-president; Dr. E. J. Combs of Oshkosh, second vice-president; Dr. E. H. Kinney of Elkhorn, third vice-president; Dr. J. P. McMahon and Dr. A. W. Gray of Milwaukee, and Dr. F. F. Bowman of Madison, committee on public policy and legislation; Dr. M. P. Ravenel and Dr. C. Harper of Madison, Dr. Gilbert E. Seaman and Dr. Hoyt E. Dearholt of Milwaukee, and Dr. Thomas Hay of Stevens Point, committee on prevention of tuberculosis; Dr. Edward Evans of La Crosse, Dr. E. S. Hayes of Eau Claire, and Dr. W. H. Washburn of Milwaukee, committee on medical education; Dr. A. W. Meyers of Milwaukee, Dr. J. C. Reynolds of Lake Geneva, and Dr. E. L. Bootby of Hammond, committee on necrology; Dr. C. A. Bardeen of Madison, delegate to act with the board of public instruction; Dr. C. A. Patek of Milwaukee, delegate to the national legislative council; Dr. Henry B. Hitz, delegate to the council of medical education; Dr. J. M. Dodd of Ashland, delegate to the American Medical Association.

HEADACHE REMEDY WITH SPANISH LABEL IS JUDGED TO BE MISBRANDED.

WASHINGTON, D. C.—Fifty dollars was the fine imposed on the shippers of a so-called headache remedy labeled "Jaquiquina," according to a Notice of Judgment just issued by the Department of Agriculture. The shipment was made by the Sidney Ross Company, a corporation of New York City, from the State of New York into the State of California. The product was

labeled in the Spanish language and the label translated into English was as follows:

"Preparation for the relief and Cure of Headache, Neuralgia, Rheumatism, Painful Menstruation, Sciatica, etc. Is not a laxative. Contains no morphine or opium. The Sydney Ross Co., New York. See that upon each package appears this signature, C. B. Riker, Directions. Dose: Two or three pills; if these give no relief within an hour's time, take two more and repeat the dose every 6 or 8 hours if necessary. Between the ages of 5 and 10 yrs. give half doses. If preferred these pills may be pulverized and be taken in water, syrup or wine."

Misbranding of the product was alleged because the label failed to state the quantity or proportion of acetanilid contained therein. Analysis showed it to contain about 230 grains per ounce.

BOOK REVIEWS.

STUDIES CONCERNING GLYCOSURIA AND DIABETES.—By Frederick M. Allen, A. B., M. D. Boston: W. M. Leonard, Publisher.

This is an excellent work and reflects great credit on the author. There is upwards of a thousand pages of text also many tables and protocols and a bibliography of about 1,500 articles pertaining to this subject.

The author states that the spirit of the work is that of a journal article but there is material enough for many journal articles. Good reviews of many articles on the problem of diabetes are included. The titles of some of the chapters follow and indicate the different aspects of the subject that have been investigated; glycemia, glycosuria and glucose tolerance; administration of carbohydrates other than dextrose; paraenteral feeding; effects of in young animals; the amboceptor hypothesis and levulosuria; the oat cure; operative diabetes; diabetes insipidus; classification of glycosurias; alimentary glycosuria and diabetes; acidosis; phloridzin; adrenalin; the nervous system in relation to glycosuria and diabetes; miscellaneous attempts at diabetic therapy; the polyglandular doctrine; the liver and diabetes; anatomy of the islets of Langerhans in health and disease; relations of internal and external pancreatic secretion.

In the concluding chapter the author has clearly summarized his results. This book, while

it probably will not be read by the rank and file of the medical profession, is one that every student of diabetes should have, it also contains many therapeutic suggestions.

DISEASES OF THE STOMACH, INCLUDING DIETETIC AND MEDICINAL TREATMENT.—By George Roe Lockwood, M. D., Professor of Clinical Medicine in the Columbia University; Attending Physician to Bellevue Hospital, New York. Illustrated with 126 engravings and 15 plates. Lea & Febiger, Philadelphia and New York, 1913.

The author states in his preface that his intention is to describe diseases of the stomach as he has happened to see them, and to present these subjects from the standpoint of personal experience. From an examination of the text the reviewer thinks he has succeeded.

The book is an especially good one on diseases of the stomach, the subject matter is well arranged and the presentation is clear and logical. The sections on acute and chronic ulcer and gastropotosis are especially good.

MINOR AND OPERATIVE SURGERY, INCLUDING BANDAGING.—By Henry R. Wharton, M. D., Professor of Clinical Surgery in the Woman's Medical College, Philadelphia. New (eighth) edition, enlarged and thoroughly revised. 12mo, 700 pages, with 570 illustrations. Cloth, \$3.00 net. Lea & Febiger, Philadelphia and New York, 1913.

This little book has always been such a favorite, especially with students, that every one will be glad to see the new (eighth) edition. This edition brings the book up to include the latest in surgery and has omitted much that needed to be discarded. Some new illustrations have been added and the book is deserving of the hearty reception the medical profession has given it.

THE SURGICAL CLINICS OF JOHN B. MURPHY, M. D., at Mercy Hospital, Chicago.—Philadelphia and London: W. B. Saunders Company, 1913. Published bi-monthly. Price per year, paper, \$8.00; cloth, \$12.00.

The publication of reports of the surgical clinics of Dr. John B. Murphy has made it possible for the physician to have a clinic at home. Numbers three, four and five of volume two cover a range of subjects far too large to enumerate in a review. The volumes have about 180 pages each and are profusely illustrated with reproductions of photographs and X-ray pictures which with the beautiful description Dr.

Murphy gives of each case and each operation makes each complete. They are as interesting as a novel to read and cannot fail to instruct. Dr. Murphy's reputation as a surgeon is all the recommendation they need.

DISEASES OF THE EYE.—By George E. deSchweinitz, M. D., Professor of Ophthalmology in the University of Pennsylvania. Seventh edition, thoroughly revised. Octavo of 979 pages, 360 text illustrations, and seven lithographic plates. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$5.00 net; Half Morocco, \$6.00 net.

This standard work on Diseases of the Eye has come to the seventh edition. It has been carefully revised and much new matter added. Reference has been made to the use of vaccine therapy in treating certain diseases of the eye due to gonorrhea and syphilis. The work is well illustrated, has large clear type and is an attractive book. Its subject matter is comprehensive, well written and thoroughly up to date.

ANATOMY, DESCRIPTIVE AND APPLIED.—By Henry Gray, F. R. S., Fellow of the Royal College of Surgeons; lecturer on Anatomy at St. George's Hospital Medical School, London. New (American) edition, thoroughly revised and re-edited, *with the ordinary terminology followed by the Basle anatomical nomenclature*, by Edward Anthony Spitzka, M. D., Director of the Daniel Baugh Institute of Anatomy and Professor of General Anatomy in the Jefferson Medical College of Philadelphia. Imperial octavo, 1502 pages, with 1225 large and elaborate engravings. Cloth, \$6.00 net; leather, \$7.00 net. Lea & Febiger, Publishers, Philadelphia and New York, 1913.

Gray's Anatomy has been the standard work on this subject for so long that no comment is necessary on the general character of the work. This edition has been carefully revised and the B. N. A. terms have been introduced in parenthesis. The book is profusely illustrated and the engravings and text are all that can be desired.

MASSAGE—ITS PRINCIPLES AND TECHNIC.—By Max Bohm, M. D., of Berlin, Germany. Edited with an introduction by Charles F. Painter, M. D., Professor of Orthopedic Surgery at Tufts Medical School, Boston. Octavo of 91 pages, with 97 illustrations. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$1.75 net.

This is a book giving full directions for massage. It gives the preparation of the patient, position, force, length of time, and the principles of the various manipulations adapted to various

conditions and different parts of the body. It must be a useful book for physicians, students and nurses.

THE OPERATING ROOM AND THE PATIENT.—By Russell S. Fowler, M. D., Chief Surgeon First Division, German Hospital, Brooklyn, New York. Third edition rewritten and enlarged. Octavo volume of 611 pages with 212 illustrations. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$3.50 net.

This book gives careful directions for the preparation of the operating room, instruments, etc.; preparation of the patient for operation; giving of anesthesia and the care of patients following the operation; it also gives directions for special operations and general principles of surgical work and post-operative care. It is well illustrated, clearly and concisely written and has proved a most useful book.

BLOOD PRESSURE, from the Clinical Standpoint.—By Francis Ashley Faught, M. D., of the Medico-Chirurgical College, Philadelphia. Octavo of 281 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1913. Price \$3.00 net.

This book will be welcomed by both physicians and students for it embodies the literature on this subject in a concise form. Circulation and its relation to blood pressure, as well as the various methods employed to determine it, and the relation of blood pressure to disease are discussed.

INTERNATIONAL CLINICS.—A quarterly of illustrated clinical lectures and especially prepared original articles on treatment, medicine, surgery, gynecology, pediatrics, obstetrics, orthopedics, pathology, dermatology, ophthalmology, otology, laryngology, hygiene and other topics of interest to students and practitioners. Vol. III. Twenty-third series, 1913; price \$2. J. B. Lippincott Co., Philadelphia, and London.

This volume has many interesting articles among which are the Diagnosis and Treatment of Gastric Ulcer and Duodenal Ulcers; Practical Points in the Management of Some Pulmonary Diseases; Gastrointestinal Toxemia, Its Cause and Treatment; and Rape in Children and Young Girls.

ESSENTIALS OF PRESCRIPTION WRITING.—By Cary Eggleston, M. D., Instructor in Pharmacology, Cornell University Medical College, New York City. 32mo of 115 pages. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$1.00 net.

This little book on prescription writing will be a very welcome addition to the student's library. It gives a full discussion of the subject from the Latin grammar to the practical writing of prescriptions, doses, vehicles, incompatibles, etc., etc.

GENITO-URINARY DIAGNOSIS AND THERAPY.—By Doctor Ernst Portner, Specialist for Urology, Berlin, Germany. Translated and edited by Bransford Lewis, M. D., B. Sc., Professor of Genito-Urinary Surgery, Medical Department of St. Louis University, St. Louis; Genito-Urinary Surgeon to St. John's Hospital and Frisco Hospital. Forty-three illustrations. C. V. Mosby Company, St. Louis, 1913. \$2.50.

The translation of this book into English gives to the physician in concise form the general principles of treatment of the urinary diseases many of which can be treated satisfactorily by the general practitioner. The author confines himself to the discussion of the more important conditions of treatment making the book more valuable to the practitioner on account of brevity.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

METASTATIC OPHTHALMIA.

W. H. WILDER, Chicago (*Journal A. M. A.*, September 27), gives an account of three cases of metastatic ophthalmia, or the condition that results from serious infections of the retinal or uveal tract. Septic endophthalmitis somewhat describes the condition, but it hardly indicates the grave features of the more severe cases which resemble panophthalmitis from traumatic or ectogenic infection of the globe. One of the cases was a septic metastatic condition probably caused by the staphylococci which were found in the blood. The eye condition improved but the patient died from pneumonia, presumably of embolic origin from the same cause. The second case was of the milder type and probably due to one of the virulent forms of streptococcus. The general septic condition of his patient was severe. In the third case it was probably of diphtheritic origin or possibly a streptococcus was a factor. The case was treated at first for an existing diphtheria and must have been profoundly influenced by the antitoxin used, for recovery ensued. Cases of metastatic ophthalmia are less frequent since the modern antiseptic methods have been introduced. Its most prominent symptoms are: Its sudden onset with blurred vision and clouding of the media, followed later by the conjunctival and ciliary involvement, increased ten-

sion and pain, which is only relieved by a rupture of the cornea or incision of the eyeball in the severe cases. In milder cases the pain may be less intense and the edema and exophthalmos less marked. They may not terminate in rupture, but as the inflammation subsides shrinking of the eyeball and total blindness ensue. Such cases have been called pseudoglioma. Metastatic ophthalmia may develop in various forms of pyemia and the prognosis is serious, for besides the usual loss of the eye the patient's life may be endangered, especially if the case is bilateral. In the latter the mortality may be as great as 85 per cent., and even more in the puerperal cases. Little can be done in the way of treatment usually, after the infection has occurred, except to alleviate suffering. When it is clear that there is pus in the eyeball and that the whole organ is likely to be involved, incision is advisable to permit drainage and evisceration, or not, according to the patient's condition. There are grounds for some hope in the future from some form or other of early vaccine treatment.

HEMIOPIC PUPILLARY REACTION.

The following are the conclusions of a lengthy article by C. B. WALKER, Boston (*Journal A. M. A.*, September 27), on the topical diagnostic value of the hemiopic pupillary reaction and the Wilbrand hemianoptic prism phenomenon. 1. Nothing has been noted in these cases in disagreement with the theories of Heddaeus and Hess that the peripheral retina lacks pupillomotor sensitiveness. 2. The possibility of a hemiopic pupillary reaction within the pupillomotor area is suggested. 3. In absolute central scotoma cases the absence of direct pupillary reaction without other cause than the scotoma speaks for the absolute central involvement of an area at least as large as the pupillomotor area, while the presence of a direct pupillary reaction when the central scotoma is greater than the pupillomotor area as tested by large disks, requires further tests for light perception as described. 4. Observation may be complicated by "concentric movement" or other psychic reactions which may sometimes be eliminated by repetition. 5. Clinically the hemiopic pupillary reaction offers no diagnostic value except possibly in a limited number of cases with central scotoma. As regards the Wilbrand hemianoptic prism phenomenon, he says: "1. The peculiar distribution of field defects in anterior and posterior lesion often adds to and encourages psychologic factors which greatly complicate the Wilbrand test. 2. Further, the presence of pseudorefixation, as demonstrated by the new method described, throws serious doubts on the topical diagnostic value of the Wilbrand hemianoptic prism phenomenon." A historical review of the work that has been done on these tests is given and a description of a new method of performing the Wilbrand test. The paper ends with a bibliography and tables are appended.

PHLYCTENULAR OPHTHALMIA.

W. WALTER, Chicago (*Journal A. M. A.*, September 27), gives a study on the bearing of the new research on the etiology of phlyctenular ophthalmia and episcleeritis as a basis of a scientific therapy. It can

scarcely be claimed, he says, that they are diseases of bacterial invasions from without. As regards the endogenous origin he suggests the possibility that lime starvation may be a fundamental nutritive defect, and perhaps the potent factor in the light weight of children suffering with these disorders. Auto-intoxication may be a predisposing cause. While he does not believe that they are primarily tuberculous he favors the theory of metastases of a latent tuberculosis. An anaphylaxis hypothesis, he says, does not explain primary causation, but it is of infinite importance in the production and recurrence of the lesion after infection. It is not practicable to follow his argument in detail in a brief abstract, but he maintains that the probable fundamental factor in a given case should first be sought in an underlying tuberculosis, and he goes into the question of tuberculin reaction and tuberculin therapy. The von Graefe theory of phlyctenular ophthalmia as given by Norris is not unscientific, although empirical in its origin. It consisted in the withdrawal of all sugar cane combinations, all acids, tea and coffee, and the sterilization of the intestinal tract by absorbing doses of calomel continued over many days, substituting for them fresh air and a nourishing diet. He has followed this treatment, amplified by realizing what has been termed an alkaline dietary must be sought for. This practice tended to lower and lower protein and non-acid contents of the diet and attention given to the lime content. A low protein antitoxic dietary, alteration of the bacterial flora of the colon, combined with sufficient cellulose to prevent stasis, made for the avoidance of enterotoxemia. These, with the specific therapy, offer the hope of a ready cure and he insists on small doses of tuberculin and a reactionless therapy in this regard.

PREVENTABLE BLINDNESS.

H. C. GREENE, Field Agent for the Conservation of Eyesight, Massachusetts Commission for the Blind, Boston (*Journal A. M. A.*, September 27), says that the tragic disablement of a hundred thousand citizens is a parade and a challenge, and when we consider that among these hundred thousand about 25 per cent. are disabled through the failures of medicine, business and state craft and one upstart profession—social service—this paradox becomes ironical. If we might judge by the general impression conveyed through the press, the seven thousand or so persons becoming practically blind each year in the United States are victims either of ophthalmia neonatorum or trachoma, but he thinks the causes are more complex. When we study the data we find that while the medical class of causes is apparently more important, the second, or social, class may prove to be of equal moment. He thinks we may overestimate the responsibility of certain diseases and gives evidence to this effect. The various causes of blindness are reviewed and the steps which, in his opinion, ought to be taken are enumerated. The first of these is public education as to the causes of preventable blindness; next comes better medical education in regard to the subject, and then more available medical treatment. Better knowledge of the causes of blindness, better social service, and more intelligent making of laws and administration of the same, are means mentioned under this heading. He reviews the laws regarding the control of certain diseases, such as trachoma, and vener-

eal diseases, and those controlling industrial occupations where blindness is a risk. The study of blindness should be undertaken in every state, official standards of vision adopted, paid social workers attached to eye clinics and proper uniform statistics kept. Inspection of school children and state regulation of birth reports are also mentioned, as well as the need of cooperation of the labor organizations, the medical associations and the existing state organizations for the preservation of eyesight.

MYOPIA.

S. D. RISLEY, Philadelphia (*Journal A. M. A.*, September 27), after referring to his former articles on the subject, reports his further studies on the percentage of myopic eyes, as shown by examinations of school children and others. These are tabulated and, with the statistics taken from his private case books, show unmistakably that there has been a steady fall in the percentage of myopic eyes in Philadelphia. They also demonstrate the truth of his claim, set forth in his former article in 1881, as to the evils of uncorrected errors of refraction. They show that the efforts of the ophthalmic surgeons in the correction of the congenital defects have well nigh banished from the well-to-do portion of the community malignant myopia and its sequels. His article is illustrated by nine charts.

APPARENT ESOPHORIA.

This is the name given by H. B. LEMERE, Omaha (*Journal A. M. A.*, September 27), to a class of cases in which there is an esophoria for distance combined with a marked insufficiency of convergence for near. The paradox they consider artificial and the insufficiency for near as the essential state, while the seeming esophoria for distance is considered as fictitious by himself and his partner, Dr. Banister. They have repeatedly noticed that when the convergence insufficiency for near has been relieved, the esophoria disappears. Its existence should be looked on as spasmodic and due to the increased effort required to secure a sufficient degree of convergence for the near point to avoid crossed diplopia. Believing this, they do not hesitate to correct the convergence insufficiency in these cases by operative treatment on the internal rectus or by prism exercises in the less serious cases, without regard to the apparent esophoria. A case is briefly reported and they discuss the diagnosis and insist on the importance of considering the convergence insufficiency as the key to the situation. They make their diagnosis, therefore, from the results of the measurement of the amplitude of convergence, finding the punctum proximum by noting the near point of the binocular vision for a dot and estimating the far point by the power of divergence for six meters (Naegel). In operating for the increase of the dynamic power of convergence they always aim to increase the power of the internal rectus and never to lessen that of its opponent. They use Savage's tuck operation, testing the muscular balance as necessary during the work and reinforcing the original suture as required.

There are certain cases of convergence insufficiency in which useful working vision can only be obtained by operation and if at the same time there happen to be an esophoria for distance it should not prevent giving relief by the tuck in the internal rectus.

OCULAR VERTIGO.

A. GREENWOOD, Boston (*Journal A. M. A.*, September 27), says that as regards the admitted facts, we can reasonably assume that excessive and abnormally directed action of the ocular muscles requires unusual and disturbing stimulation of the motor oculi nerves for its accomplishment and asks if this unusual action cannot act reflexly, through Deiter's nucleus and the cerebellum, an unusual stimulation of the labyrinthian branches of the eighth nerve, and thus cause vertigo. Ordinarily this stimulation must be less than that of the rotation and thermic experiments, and ocular vertigo thus produced is comparatively milder than that in Menier's disease. During recent years an increasing number of patients afflicted with vertigo, failing to secure relief from the internist or otologist have sought and obtained it from the ophthalmologist. The future will probably show eye-strain to be one of the commoner causes of vertigo. Within the last three years Greenwood has carefully noticed such patients in his private practice, nineteen in all, and he reports them, more especially on account of the almost uniform type of refraction error apparently causing the vertigo, and the uniformly good results obtained with proper correcting glasses. He finds that most of the reported cases of ocular vertigo have occurred, like his, in patients with astigmatism and oblique axes. He says: "The accurate adjustment of the eyes, by normally acting ocular muscles and fusion centers, is essential for binocular vision, judgment of distances and special perspective. Eyes having astigmatism with the meridian of greatest and least curves oblique, and eyes having cylinders with axes oblique placed in front of them have this perspective disturbed, and the resulting unnatural activity required of the oculomotor nerves and the higher fusion centers may cause reflex vertigo, or possibly vertigo independent of the labyrinths."

POST CATARACT ABSTRACTION-DELIRIUM.

W. R. PARKER, Detroit (*Journal A. M. A.*, September 27), reviews the literature of mental disturbance following cataract extraction and reports eleven cases, all occurring in aged persons, seven men and four women. The mental symptoms appeared from twenty-four hours to six days after the bandages had been applied and the symptoms were in all cases most prominent at night. In no case was there any sign of delirium before or at the time of operation and for some time after. The general anesthetic was not used. One of the most notable things was that in none of the cases was the eye permanently damaged by the patient. Seven of the patients were rational on being discharged from the hospital. One was unbalanced on leaving

the hospital but had no trouble after reaching home. Three were still delirious on discharge and subsequent history was not obtained. History of heredity was not included in the notes and he does not attempt to classify the cases, but offers the following observations: "1. The delirium occurred in 0.29 per cent. of the cases operated on. 2. No patient showed marked signs of mental disturbance while under observation, either before or at the time of the operation. 3. One case showed possibility of infection from an old cystitis. 4. The urine was free from sugar, albumin or casts in nine cases. No record was made in two cases. 5. Codein was administered in two cases, 1 grain hypodermically, immediately after operation. 6. The possible effects of cocaine can be eliminated, as the mental disturbances did not occur in a single case until at least twenty-four hours after the time of operation and there was no rise in temperature."

SCLERAL WOUNDS.

L. M. FRANCIS, Buffalo (*Journal A. M. A.*, September 27), discusses the surgical treatment of a certain type of penetrating wounds of the sclera by means of a double conjunctival flap. The type of wounds concerned is of those located far behind the corneal scleral junction, so as to permit relatively free elevation of the neighboring conjunctiva and those which are under general surgical principles suitable for closure, no matter what their shape or extent or whether they are ragged or smooth. First of all the tags should be trimmed down and the wound made ready for coaptation. It is in this, he claims, that his technic is an improvement over others. "By means of a strabismus or a tenotomy hook, the conjunctiva on all sides of the lip of the wound is freely loosened from the sclera. In a radial wound, it is my practice so to face the conjunctiva on each side, for about a quarter of the way around the eyeball and to a relative extent in the other directions; if equatorial, as far forward as the corneoscleral junction. Double-armed fine silk sutures, one or two, depending on the size of the cut to be closed, are then placed in the margin of one of the newly made conjunctival flaps. The needle or needles, as the case may be, are then carried well up under the other flap, brought to the surface and firmly knotted. The result is to tuck up one flap under the other and bring one layer of intact conjunctiva over the sclera wound. The surface of this flap is then carefully abraded, usually by scraping with a knife. The remaining conjunctiva flap is then brought over the first and stitched down in the opposite direction. When completed the wound is closed by the second layer of the healthy conjunctiva and correspondingly reinforced. In drawing over the flaps, in the manner just indicated, it is important that they be snugly drawn and firmly knotted. Otherwise one of the most important features of the operation will be lost, namely traction on the globe in such a way as to bring together the sclera edges and hold them firmly in place." If the wound is such that the operator doesn't care to trust to the conjunctival flaps but prefers to close the sclera as well, it should be done before the conjunctival flaps are freed. Francis advises the use of rat-tail tendon for sutures and the use of fine sharp needles in this operation. The advantages and summed up by him as the firm appo-

sition exerted by the two flaps on the edges of the wound; the thicker and firmer and less yielding scar and the protection from outside infection afforded by the two layers of sound conjunctiva.

SYPHILIS OF BULBAR CONJUNCTIVA.

C. M. SPRATT, Minneapolis (*Journal A. M. A.*, September 27), notices the comparative frequency of extragenital chancres, especially their occurrence and location in the ocular apparatus. Thus far he has found but twenty-one cases of chancre of the conjunctiva, and of these only three were at the limbus, including one of his own observation, which is here reported. He analyzes the reported cases and gives the modes by which the conjunctiva may be infected, such as direct contact in kissing or coughing, indirect by the meeting of the fingers and by infected surgical instruments, etc. The period of incubation is difficult to determine, as the time of first infection is generally unknown. The first symptoms are irritation and localized redness, but this soon passes through the papular and ulcerated stages. Pain is not usual and the disease disappears usually in from six to ten weeks. The diagnosis at first is difficult. Later one must exclude tuberculosis, herpes, phlyctenule, secondary luetic symptoms, tumor, diphtheria, Parinaud's conjunctivitis, which is characterized by numerous pedunculated masses of conjunctiva, which later form superficial ulcers and numerous small yellow nodules in the subconjunctival tissue. There is no induration, but chemosis is marked and the preauricular lymph-node is swollen and often suppurates. The chancre of the conjunctiva heals without permanent injury to the eye, leaving only a small white scar. A mild antiseptic should be employed and the use of calomel as a dusting powder is recommended. Salvarsan or neosalvarsan should be given promptly when diagnosis is made. A brief synopsis of reported cases is given.

ARTIFICIAL ILLUMINATION.

N. M. BLACK and F. A. VAUGHN, Milwaukee, Wis. (*Journal A. M. A.*, September 27), discuss the subject of ocular discomfort from artificial light and offer a hypothesis as to its causation, based on the Edridge-Green theory of vision of the chemical stimulation of the elements of the retina through the decomposition of the visual purple produced by light. "The hypothesis advanced is that with light waves from artificial sources after reaching a certain intensity, which is probably slightly above that which is ordinarily required for general use of the eye, the difference in the spectral quality of artificial light, compared with that of daylight, causes a more rapid decomposing of the visual purple, with consequent increased rapidity in its exhaustion and increased stimulation of the nerve centers controlling the protective mechanism of the eye. There is also a lessened opportunity for reproduction of the visual purple, as the intensity of the light source is practically constant." Increased use of the eye at present over former times has also to be considered as the question of contributing ocular fatigue arises. The symptoms of ocular discomfort vary. The most common is a hot and dry feeling

with a fulness in the eyes and a slight blurring of vision, and relief can be obtained by a brief closing of the eyes. There is frequently an actual ache about the eyes and head and mental activity is affected. This effect Black considers mainly due to the ultra red rays and by glare from reflection and otherwise. He criticises the paper commonly used in this regard. While the eye at present has become adapted to solar light it is less so to the changes in artificial light. That sunlight is not ideal is admitted and it is badly utilized in our dwellings and may also produce the symptoms described which may ultimately lead to serious damage to the organs of vision.

THE SKULL AND SELLA TURCICA.

J. B. POTTS, Omaha (*Journal A. M. A.*, September 27), discusses the subject of pituitary disturbance and of the abnormalities of the skull in its region, more especially in relation to the eye symptoms produced. In the past four years he has been using the x-ray to localize foreign bodies and suspected foreign bodies in the eye. In these observations he has been giving attention to the measurements from the clinoid process to other parts of the skull with special reference to the normal size of the pituitary body. An analysis of his findings shows that the normal pituitary body varies from 8 mm. anterior to posterior 13mm., and from 6mm. in breadth to 10mm. While a larger size than this may not be pathologic, it should be looked on with suspicion. There is no apparent relation of the measurements of the skull with the pituitary body, and another striking point is, unlike the frontal sinuses and sphenoids, the sella turcica reaches a size nearly equal to that of an adult at an early age. Its variations seem to have no relation to those of the sinuses. Twelve cases of patients diagnosed as associated with pituitary disease or disturbed function are reported. He thinks it not surprising that the hypophysis frequently becomes enlarged, and this is the more important owing to the peculiar location of the gland. We have not only to consider its functional disorder but the effects of pressure on adjacent structures. The article is illustrated.

THE DIGNITY OF OTOLARYNGOLOGY.

In his chairman's address, R. LEVY, Denver (*Journal A. M. A.*, September 27), dwells on the honorable traditions of the specialty of otolaryngology and modern rhinology, and appeals to the members of the section to maintain these ideals and demand of those who enter it a high moral tone and adequate preparation for their work. The regular four years' course and hospital training are only preparatory to the development of a competent specialist, and he calls attention to the excellent report of the committee of the American Laryngological, Rhinological and Otological Society appointed to consider the best methods of teaching these subjects. Slipshod and careless methods should be turned out and every operative interference be considered as a hospital and not as an office procedure as far as possible. The shock of even a minor operation has been known to have serious after-effects. Every known method of surgical cleanliness should be used; the upright

posture giving way to the recumbent, etc. These ideal as well as practical considerations should be kept before the specialty, and thus arouse its own self-respect as well as insure for it, before the profession, the dignified position it deserves.

THE ANIMAL VERSUS THE HUMAN BEING.

Inquiry was recently made of the Minnesota State Board of Health as to a certain family affected with tuberculosis. The family was large and the house small, so that such care could not be given to the afflicted as to prevent the infection of others. The father had means and could afford to care properly for those diseased, if compelled to do so. A state board inspector was sent to investigate and this is what he found. A well-to-do farmer, with a farm of 320 acres worth \$100 an acre or more; a breeder of horses, having at the time of inspection seven imported Percheron horses and a herd of about twenty-five horses in all; a breeder of registered hogs, his hogs being among the first in the state to be given the serum protective against hog cholera. This farmer has lived in _____ County for about thirty years. Sixteen years ago his first wife died of tuberculosis, leaving three children. He married again. His second wife has had thirteen children. The family now consists of father, mother and fourteen children. A daughter of the second wife, age 15, died last August of tuberculosis. A son of the first wife, aged 19, has been ill with tuberculosis for at least two years. No precautions have been taken to prevent his infecting others. The mother, with one newly-born child and another too young to walk, is responsible for the care of this family of fourteen living children. There is no medical care being given the son afflicted with tuberculosis. Apparently this farmer can appreciate the breeding of horses and the protection of hogs from hog cholera. But he cannot appreciate the danger of tuberculosis or the need of protecting not only the members of his own family, but others also, from this disease. The annual loss, in the state of Minnesota, caused by the death of wage-earners from tuberculosis is about \$12,000,000. The number of deaths annually from tuberculosis in Minnesota is about 2,250. The estimated number of cases of tuberculosis in Minnesota at the present time is 10,000 or more. Is this human disease worthy of the same efforts for its extermination as are hog cholera or glanders?

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LEA AND FEBIGER were as usual prominent among the exhibitors at the annual meeting of the Vermont State Medical Society, having a large display of their most recent publications, the most notable being "Surgical Treatment" by Sir Watson Cheyre of London, and "Modern Treatment of Mental and Nervous Diseases" by William A. White of Washington and Smitt Ely Jelliffe of New York. A large sign drew the attention of members to the new edition of Osler and McCrae's *Modern Medicine*, which is to be condensed into five volumes and published early in 1914.

THE RIPENING OF FRUITS.

The place which fruits are assuming in the dietary of man is one of growing importance. Certain species, like the apple and pear, the plum and the grape, have long enjoyed a deserved popularity; others which were once among the rarities in the United States are now finding wide-spread favor. Melons and other fruits are now being shipped by water from the tropical regions where they are grown to the centers of distribution. Bananas, which were found only in a few seaboard towns a generation ago, are now common in every region of America. In Great Britain, where they were little known less than two decades ago, they are now the "poor man's fruit."

The ripening of fruits plays so important a part in their availability and in some of the problems of transportation that authentic information on this subject is much to be desired. Some fruits, like the apple, may be allowed to ripen almost fully on the tree and may be kept in the ripened condition for relatively long periods if proper attention is paid to their manipulation and storage. Other fruits, like the berries, cannot

be kept in the ripe condition very long before deterioration and decay set in. In still other cases, as with the banana, the fruit may be picked and transported advantageously before the final ripening has begun; and this process can then be controlled in the market and home as the conditions demand.

The physical changes, like the variation in color of ripening fruits, are familiar, since they are evident to the senses; but these alterations are merely indicative of changes in the chemical make-up of the fruits under the conditions which determine ripening. Heat, moisture, air and light may all participate in determining the characteristic changes that ensue. Laboratory investigations in recent years have given clearer indications of what takes place. Among the changes are the transformation of starch into sugar, the conversion of soluble tannin compounds with their astringent properties into insoluble forms, the actual lessening of the quantity of acid, or the masking of the acid flavor by the accumulation of sugar, the softening of woody tissue, and the increase and storage of water in the form of juice.

With the growing knowledge of what the ripening of fruits really involves, says *The Journal of the American Medical Association*, we are certain to acquire better ideas of what a properly ripened product should really be. The fact that unripened (winter) apples are unfit for consumption in the early fall, because instead of sugar they contain a large amount of raw starch which will disappear with the "mellowing" process, will be understood in a more intelligent way than has usually been the case. Furthermore, the facilitation or other regulation of the natural processes of ripening by artificial means will make it possible to dispel the limitations hitherto placed by season or distance. The beginnings are already apparent in the practices of modern commerce.


A CLEAN RECORD IN THE CANAL ZONE.

Those who have been following the remarkable record of the work of sanitation of the Isthmian canal, and have watched the gradual reduction of the death-rate and the elimination of preventable disease, have hoped that before the monumental work of constructing the canal was finished it might be possible for Colonel Gorgas

to present a report that would be clean as far as death from disease was concerned. The report of the Department of Sanitation for the month of August, 1913, just received, shows that during that month there were thirty-nine deaths from all causes among the employees of the canal commissioners. Of these, one, a Peruvian, died of malaria; another, a Spaniard, of alcoholism, and the third, a Greek, of appendicitis. The only deaths among white Americans which occurred during the month were two from violence, one due to an accident on the railway and the other to an accident in the quarry. Among the 12,481 white American men, women and children on the Isthmus connected with the commission—that is, employees and their families—not a single death from disease occurred. The exodus from the Canal Zone has already begun; those employees whose work has been completed are returning to the United States with their families. The number of American citizens resident in the Canal Zone will probably decrease steadily in the future. It is a fitting climax, says *The Journal of the American Medical Association*, to the work of Colonel Gorgas, which has challenged the admiration of the civilized world, that the month which probably marks the high tide of American occupancy of the Canal Zone should have passed without a single death from disease in the American colony.

TEMPERATURE AND HUMIDITY IN HOSPITALS.

Americans are inclined to pride themselves on the ingenuity they exhibit in the construction of public buildings and on the novelty and up-to-date character of the devices introduced. Plumbing and heating systems, elevators and telephones, lighting and cooking devices are pointed out in exemplification of the newest that the mechanic arts and skilful labor can provide. In our emphasis of the mechanism we are all too prone to overlook the man; for it is on the human brain that the successful working of all these varied arrangements ultimately depend. This is well illustrated by observations recently made on the temperature and humidity in six New York hospitals. There, if anywhere, one would expect heating and ventilation to be mastered in the highest degree. Yet the statistics gathered



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show that the control of temperature is more a question of management than of the system employed. In two hospitals, one with window ventilation and the other with a plenum system, a uniform temperature was regularly maintained despite the difference in the systems employed. Other institutions showed wide variations in temperature. One hospital was "consistently overheated"; for certainly temperatures between 75 and 80 F. cannot be regarded as desirable. The high temperatures in the children's wards of almost all the hospitals investigated was also noticeable. Certainly it is questionable whether a ward with a day record of 76 F. should be allowed to cool to 57 at night unless special precautions are taken for the protection of children who persist in sleeping uncovered.

Low humidity is a rule in hospitals and strikingly so in the operating-rooms. Of the seventy-five records taken, sixty-seven were between 20 and 45 per cent. relative humidity. This is, of course, due to the high temperatures; for the outside humidity reaches far higher figures. It matters not, according to *The Journal of the American Medical Association*, whether this more humid outside air is brought in through windows and ducts or not; for the warming of the air to the high room-temperatures has a drying effect. The only suitable way to alter the situation is to provide artificial humidification. As for the perversion of temperature and humidity, they appear to depend on the inefficiency of the man in charge rather than the system installed.

CONCERNING "FRIEDMANN VACCINE."

At a recent meeting of the Rhode Island Medical Society, Dr. Barnes of the Rhode Island State Sanatorium for Tuberculosis presented a report on his results with the Friedmann vaccine. It merely adds to the mass of information that goes to make up the literature concerning Friedmann's attempt at exploiting the consumptive, all of which shows the Friedmann treatment to have no advantage over other methods of treating tuberculosis; more, in all probability, it is a dangerous one. The medical profession has, until recently, maintained toward this product an attitude of reasonable scientific skepticism, says *The Journal of the American Medical Association* in a recent editorial. In view of the fact,

however, that it seems impossible to find a single reliable favorable report, the time has come for an end to the hope that in the Friedmann vaccine we have a cure for tuberculosis. Moreover, since the methods of exploitation have become so obviously commercial, with what seems to be an utter disregard for the humanitarian viewpoint, the time surely has come for not only a definite stand against the sale of this product but for positive opposition to the methods used by those financially interested in its promotion. Friedmann secured the financial results which widespread newspaper exploitation brought him, and slipped away, leaving a host of "Friedmann institutes" to divide with him the dollars of the too hopeful and credulous sufferers. These "institutes" are being organized in various parts of the country and the personnel of those connected with these organizations in practically every instance is sufficient to suggest their true nature. Steps have been taken in several states to check this exploitation of the consumptive for commercial gain, especially in Idaho, Iowa and Arkansas. In others, the weakness of local ordinances has made this impossible. What is now needed is that these unscrupulous attempts should be met with an intensive campaign of education of the public concerning the dangers and worthlessness of this treatment.

HEALTH AND FINANCE.

This is an age which places an ever-increasing emphasis on the relation of good health to individual hygiene, to social effectiveness, to general prosperity. The race is to the community whose children thrive and whose workers keep well. Human health is a purchasable commodity, as has been demonstrated in Cuba, Panama and the Philippines. New York City, with its advanced health ordinances and comparatively liberal supply of money to carry them out, is a striking example of what an urban community can do in the way of a radical reduction in infant mortality and in the general death-rate. Yakima County, Washington, is another example showing the result of systematic health work and liberal expenditure in a rural district. In twelve months under a full-time health officer, with a well-equipped laboratory and a corps of visiting nurses and sanitary inspectors, the death-rate in the county from typhoid fever was reduced from

128 per hundred thousand to sixteen, and the deaths from all causes fell from 538 in 1911 to 393 in 1912. Other instances of like effective work might be cited.

The mayor of Colorado Springs said recently to the delegates of the American Public Health Association that the problems of public health are even more vital than those of individual health. Appreciation of this fact comes slowly. Money to purchase public health is given grudgingly by those in charge of the public purse. St. Louis, the fourth city in the United States in both population and manufactures, spends annually only \$100,000 on its health department, whereas it spends \$2,000,000 annually on its police department, twenty times the amount spent for the promotion of public health. Larger appropriations for health purposes will only follow the creation of public sentiment demanding them, and in accomplishing this the newspapers must play the chief rôle. The St. Louis *Republic*, recognizing this, has applied itself to the creation of a public demand for better support of the health department of St. Louis, and will present a plan for making that city the healthiest in the United States. At present the death-rate in that city is considerably less than that of other large cities in the same latitude, and almost as low as that of Cleveland, New York and San Francisco, cities more favorably located geographically and climatically; but it is believed that it can be made still less. This commendable object will require not only increased appropriations for the health department, but the sustained cooperation of all the citizens, and it is this cooperation which, with an intelligent grasp of the requirements, the *Republic* has begun a campaign to secure.

The newspapers and citizens of every community should awake to the fact that community health is a first principle of effective local government, and should adopt for their slogan, Public Health Is a Purchasable Commodity.

CLEAN HANDS.

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that make him a public danger. If he could be made to wash his hands, it is alleged, transference of infection would be prevented. Those who regard bacterial cleanliness as simply a matter of careful hand-washing are likely to obtain disappointing results if a recent experiment performed by Cummins is at all indicative of what may occur under ordinary conditions of life. This observer, after dipping the right index-finger in a solution containing typhoid bacilli, proceeded to carry out measures of cleansing as follows:

1. Rinsed in cresol solution.
2. Then held the finger under the tap, rinsing first in cold, then in very hot water.
3. Washed very carefully in about 0.5 c. c. of sterile water, in a watch-glass, and plated the whole of the water used for this purpose. Result: three hundred and thirteen colonies of *Bacillus typhosus* on the plate.
4. After the washing in sterile water mentioned, the tip of the finger was thoroughly soaked in absolute alcohol, allowed to dry, and the washing in sterile water repeated. The "washings" were again "plated." Result: Four colonies of *B. typhosus*.

Even when the fingers are thoroughly rubbed with a towel and the danger of finger infection thereby lessened, it is obvious that the towel in its turn may become infected. The sort of accident that may follow from such conditions is illustrated by another observation of the same author:

On Sept. 26, 1912, 100 c. c. of soup freshly prepared from the "stock pot" was placed in a china bowl, no attempt being made to sterilize the bowl or to cover it from the air. The tip of the experimenter's right index-finger was allowed to come in contact with a solution containing typhoid bacilli. The china bowl was then lifted in such a manner that the infected finger came in contact for a moment with the contained soup. The soup was left at room temperature with free access of air and dust to the open bowl. Bacterial examination showed that typhoid bacilli were present apparently in pure culture, numbering 15,500 per cubic centimeter.

Such facts as these, says *The Journal of the American Medical Association*, add strength to the agitation for better supervision over the conditions of those persons engaged in serving and preparing food for large numbers of people. The

action of the Pennsylvania Railroad in providing for the systematic inspection of all of its employees in the restaurant and dining-car systems has already been noted. This example should be followed by the management of other organizations engaged in the handling and serving of food on a large scale. Social clubs and similar bodies, as pointed out by a correspondent, recently, are often lax in this regard. The supervision of cooks and waiters in dining-cars, hotels, restaurants and clubs is certainly a matter that deserves more attention than it has yet received. "Defective plumbing" is far less important.

EYE-STRAIN AND OCCUPATIONAL DISEASE.

In 1910 the Census Bureau issued a classified list of between 7,000 and 8,000 separate and distinct occupations. Dividing these occupations into groups, designed to indicate their rôles in creating or increasing the disease directly or indirectly the result of eye-strain, it has been shown that the least eye-strain will, as a rule, be found in that group classed as farmers, agricultural laborers, common laborers, soldiers and railway workmen; and the most eye-strain found in the group classed as students, clergymen, all professional men, clerks, engravers, draftsmen and the like.

In the first group, composing 40 per cent. of the population, 1 to 20 per cent. have ocular or eye-strain diseases. In the last group, composing 20 per cent. of the population, 80 to 100 per cent. have ocular or eye-strain diseases. Eye-strain increases with work at near range—as in office, store and home—and the modern growth of population is largely taken up by the town and city. The nearer the work, and the more minute, the greater the eye-strain. The more constant this focalization, the more severe the eye-strain. With decrease of the illumination below a high physiologic standard there is a geometrical increase of eye-strain. It is a well-established fact that either the overuse of the eyes, or the use of eyes under bad conditions, may give rise to eye-fatigue or to eye-strain, and many eye specialists believe that at least 80 to 90 per cent. of headaches are dependent on eye-strain. It is impossible to ignore the probability that many in-

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dividuals working by gaslight, or even by electric light, in dirty, unpainted, overheated rooms, with impure air and excessive moisture, for ten hours a day, or merely for the last two hours during the day, use up a great deal of nervous energy and suffer from eye-fatigue or eye-strain and its consequences.

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THE USE OF ICE IN HOMES.

The average American family is paying about four times as much as it should for ice and ice-boxes. This fact, of interest to every householder, is the conclusion drawn by Dr. John R. Williams from an investigation made in Rochester, N. Y., and reported in a recent issue of *The Journal of the American Medical Association*. According to Dr. Williams, the problem of pure milk is only partly solved with the introduction of clean milk into the home. The cleanest and purest milk will soon become foul if proper means for its preservation are not used. Bacteria multiply with great rapidity in a temperature above 50 F., while below that temperature their growth is held markedly in check. These facts are of importance to mothers and housekeepers, also to milk commissions and dealers, because charges of "bad milk" are often unjustly made against those interested in pure-milk work.

In the study of the market milk problem in Rochester, it was found that nearly half of the families of that city endeavor to get along without ice. In such homes condensed milk, proprietary milk and dipped milk purchased at the nearby store are mainly used. Five sections of the city, representing different classes of people, were studied. Upward of a hundred homes in each district were visited.

It was found that during the warm months of the year milk is delivered during the night or early morning hours before the family is awake. When no box is provided for receiving it, it is left on the door-step exposed to heat, dust and the attentions of domestic animals. Few homes occupied by working people are equipped with boxes for receiving milk. In an investigation on this point, of 504 homes examined, only eleven had milk boxes. Houses in the well-to-do sections are better equipped, 359 out of 411 having proper facilities for receiving milk. The exposure of milk to warm air for three hours or more is sufficient to raise its temperature at least 10 degrees.

The usual means of preserving perishable fresh foods in the home is to store them in a cool place. When a refrigerator is not used, either the cellar or living-room is used. It was learned that 2,243 homes of 5,431 examined did

not use ice. It is probable that half of the homes in the city rely the entire year on the cellar or pantry for their food preservation, and that more than three-quarters of the homes deny themselves the use of ice, excepting for a few weeks during midsummer. Not one living-room was found having a temperature below 60 F., nor was one cellar discovered having a temperature below 55 F. It is evident that these rooms during the warm months of the year, at least, are not sufficiently cold to protect food from decomposition.

In the study of ice-boxes, out of 243 examined, only 103 had a temperature below 50 F. The other 143 registered above that temperature and were therefore worthless for preserving food. Better refrigerators were found in the homes of the well-to-do; nevertheless, 45 per cent. of these had temperatures above 50 F., while nearly 70 per cent. of those found in the homes of the working people exceeded that temperature.

The inefficiency of these refrigerators is due to their defective construction and insufficient insulation. Most of them are wooden boxes built of half-inch lumber, lined with galvanized iron or zinc. The walls vary in thickness from 2 inches to 4 inches. The space between the metal lining and the wooden sides usually contains insulating material, as paper, felt or mineral wool. In many of them nothing more is to be found than a sheet or two of paper.

The rate paid by the consumer for ice varies according to the amount used, the amount taken at each delivery and the ability of the purchaser to pay for it in advance. Poor people living near the railway tracks get it at the cars for 20 cents per hundred pounds. If it is delivered to their homes they pay from 40 to 75 cents per hundred pounds.

The cost of harvesting and storing natural ice is so variable that it is difficult to determine it even approximately. It probably costs less than \$2 per ton. It costs between \$2 and \$2.25 per ton to make artificial distilled-water ice. The consumer pays the dealer the difference between \$2.25, the cost of manufacture, and \$8.50 per ton, or \$6.25 for distribution. Thus the cost of distribution is nearly three times the cost of manufacture.

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1. The temperatures of cellars or living rooms in dwelling-houses are not sufficiently low during the warm months of the year to protect milk and other perishable foods from decomposition. An efficient refrigerator is a sanitary necessity.
2. Most of the refrigerators in common use are almost worthless and grossly uneconomical.
3. If more economical methods of ice manufacture and distribution were employed, the cost of ice to the consumer could be materially lowered.
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TABLE OF CONTENTS

ORIGINAL ARTICLES:—

Functions of Medical Societies, By William Warren Townsend, M. D.	287
A Vermont Pellagra Case, By W. L. Wasson, M. D.	289
EDITORIAL	292
NEWS ITEMS	293
MINUTES OF THE ONE HUNDREDTH ANNUAL MEET- ING OF THE VERMONT STATE MEDICAL SOCIETY. HELD AT BURLINGTON, OCTOBER 8-10, 1913.....	295

THE VERMONT STATE MEDICAL SOCIETY. WHAT IT STANDS FOR AND WHERE IT STANDS IN THE PRO- FESSION	307
OFFICERS OF THE VERMONT STATE MEDICAL SOCIETY.....	312
THERAPEUTIC NOTES	xii
OFFICERS AND MEMBERS AND DATES OF FIXED MEET- INGS OF THE CONSTITUENT COUNTY SOCIETIES....	xii

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CERTAIN CLINICAL FACTS. THUS, A KNOWLEDGE OF THE CHEMICAL CHANGES IODINE UNDERGOES AFTER INGESTION, THROWS LIGHT ON THE CLINICAL PHENOMENA OBSERVED, BUT BETTER STILL AIDS IN DETERMINING WHICH IODINE PRODUCT IS OF GREATEST VALUE.

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An Important Report

By Professor W. A. Puckner

Secretary of the Council on Pharmacy and Chemistry
American Medical Association

In the Journal of the American Medical Association, September 13, 1913, Professor Puckner reports the result of the investigation of products of a number of pharmaceutical houses. In this report are embodied the results obtained by Dr. R. A. Hatcher, of Cornell University Medical School, who made a special examination of the various digitalis products of these pharmaceutical houses, demonstrating the following

FACTS

First.—That commercial digitalis preparations vary most widely in activity.

Second.—That Mulford Digitalis, the most active, is four times as active as the weakest.

Third.—That the digitalis prepared by other firms, assumed to be physiologically assayed, showed a variation of more than 100 per cent in strength.

Fourth.—That the digitalis next in strength to the Mulford preparation, was only 65 per cent, and the weakest, 29 per cent in activity.

CONCLUSIONS

While there is no official standard of activity for digitalis, Dr. Hatcher adopted the Mulford Fluidextract Digitalis as the standard of comparison, because its activity was that of a good digitalis. The report proves the activity and reliability of the Mulford Digitalis, and coincides with the former report made by the United States Bureau of Hygiene, tabulated in Bulletin No. 48, December, 1908, by Edmunds and Hale, relating to the Mulford Fat-free Tincture of Digitalis—**Digitol**.

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LEPROSY IN THE UNITED STATES.

Leprosy exists in many states and in all of our island possessions. The control of the disease is a problem of national importance, in the opinion of Surgeon-General Rupert Blue, of the United States Public Health Service. In a recent issue of *The Journal of the American Medical Association*, Dr. Blue discusses in detail its existence and the possibility of its control. This disease, which has afflicted mankind since the beginning of history and which most persons know of only through the Bible, was undoubtedly introduced into the United States from abroad, but the exact time of its first appearance in this country is uncertain. Cases have been imported into the Gulf states through seaports, to the Pacific Coast through Chinese immigration and to the northern central states by Scandinavian immigration. In some of these states the disease was evidently more common many years ago than at the present time. In Louisiana, where no record is found of leprosy 140 years ago, the number of leprous beggars on the streets of New Orleans in 1786 was so great that the city authorities had to isolate them in an institution outside of the city. On account of the lack of records of death and disease in many of our states the extent of leprosy in the United States cannot be accurately estimated. A report made by the United States Marine-Hospital Service some years ago showed 278 cases in the United States.

In 1909 reports were obtained of 139 cases in thirteen of the states, 764 in Hawaii, 17 in Porto Rico, and 2,330 in the Philippine Islands. In 1912 146 cases were reported in the United States, 606 cases in Hawaii, 28 in Porto Rico and 2,754 in the Philippines, making a total of 3,624 officially reported cases in the United States and its possessions. On account of the loathsome character of the disease, the helplessness of those afflicted with it, and the public dread regarding it, leprosy has been the subject of consideration by the Federal government for many years. In 1889 a regulation was issued forbidding the entry of any vessel to any port of the United States without a certificate from the proper official showing that no case of leprosy was to be found on board. Lepers apprehended and detained at quarantine were deported to the foreign country from which they came. This regulation is practically in force at the present time. The immigration laws also forbid the landing of lepers, so that there is ample authority for the exclusion from this country of those afflicted with the disease, although on account of its long period of development the possibility of the entry of occasional cases must be recognized. The immigration laws provide that any alien afflicted with leprosy may be deported at any

(Continued on page viii).

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FOR SAMPLES AND LITERATURE, ADDRESS:
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(Continued from page vii).

time within three years after his arrival. The Federal government is thus able, by deportation, to relieve the state of the burden of the care of those who may have been overlooked at the time of their entrance into this country. In 1891 the Surgeon-General of the Public Health Service recommended the establishment of a national leper hospital by the Federal government. The need of such an institution still exists. Federal, state and municipal health authorities have for years urged the establishment of a national leper home. In the meantime the Public Health Service is studying leprosy in the hope of devising methods of prevention and cure, so that this serious problem may be properly solved.

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UNCLE SAM ON DIET.

On September 20th, the Department of Agriculture, probably at the behest of interested parties, sent out an official warning against "freak diets" and advised people to eat what they want when they feel like it.

The department is all right in exposing the diet fakers who have something to sell. But the department is all wrong when it sets itself up as an authority on diet, in view of the following letter we have in reply to a request for food analyses:

"Dear Sir: Your letter of the 11th inst. at hand. I regret to state that this department has not issued any food analyses giving inorganic salts of these substances. Respectfully, W. D. Bigelow, Acting Chief."

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Vermont Medical Monthly.

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DECEMBER 15, 1913.

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ORIGINAL ARTICLES.

FUNCTIONS OF MEDICAL SOCIETIES.

BY

WILLIAM WARREN TOWNSEND, M. D.,
Rutland, Vt.

Among the many radical advances made in the United States during the past half century affecting medical science is the extension of the system of state medical associations or societies. While we all take pride in the honorable age of our own state medical society now rounding out its first century of existence, we must not lose sight of the fact that colonial and state organizations in Massachusetts, New Jersey, South Carolina, Delaware, New Hampshire, Connecticut, Rhode Island, New York, Georgia and Maryland antedated our original organization, and that, too as far back as 1735.

It was hardly to be expected that the middle western states should give their attention to the organization of medical societies at so early a period, but even so, we find Michigan following Vermont in the year 1819. Thus the pioneers along these lines were found in a comparatively restricted territory for the period between the early development of medical schools, faculties and hospitals down to 1850 or thereabouts.

Since that date the idea has firmly taken root and something like order has been evolved from the rather chaotic conditions obtaining before that time. Just as other state professional associations and societies sought to keep pace with the development of their peculiar specialties, so state medical societies left their impress upon the medical profession. As a direct feeder to the American Medical Association, the state society, recruited from the various county societies, occupies a unique position. It is, in effect, the watch dog of America's national professional reputation. Just how far this vigilance has been justified may be inferred from the fact that in the century preceding 1910 the United States and Canada claimed the dubious advantage of having 447 medical schools of which possibly 156 are

still in operation. In much the same spirit of barter that attends the sale of a seat on the New York Stock Exchange, we are told, the various "chairs" in some of the pseudo-medical institutions were held for commercial disposal. A single instance cited by a distinguished physician is very much in point. He relates that only recently a professor in a now defunct Louisville (Ky.) school, who had agreed to pay \$3,000 for the combined chair of physiology and gynecology, objected strenuously to a division of the professorship assigning him physiology, on the ground that the "reflex" which induced the purchase really went with gynecology and so there was a failure of consideration.

Clearly as such a situation calls for the restraining influence of a self-respecting society, it does not by any means justify the action five years ago of a certain western state organization. A committee had been duly appointed to submit a draft of a new constitution and by-laws to contain many reformatory provisions in the interests of clean professionalism. Among other provisions of the constitution that actually passed the state society was one directing the manner of electing a president and declaring that such an election, *ipso facto*, entitled the lucky candidate "to be deemed and known" as the head of the profession within the state! Whence it appears that professional salvation may be assured at too great a cost.

In common with other praiseworthy associations the state medical society has not escaped the querulous criticism that its tendencies are unionistic to all intents and purposes; that a selective membership smacks of monopoly; that the segregation of professional men in the state, whether designedly or otherwise, is a standing menace to the art of healing; that it fulfills the definition recently given by Hon. William M. Ivis of New York who humorously referred to Bar and Medical Associations as certain "good" kinds of combinations in restraint of trade. No thinking man in the profession or out of it can be misled by any such pretense. If the profession is to advance; if the fruits of research are to be disseminated; if the community is to be the gainer by this dissemination, there is a posi-

tive demand for such opportunities as the medical societies offer for the interchange of experience and opinions.

It is unnecessary to advert to the many rabid attacks upon the societies made by irresponsible practitioners and unintelligent laymen, under the guise of being what they loosely term "healers" and "curers." It is equally useless at this point to seek to differentiate these worthies from those who have earned an impregnable standing in the profession, but it does seem fitting to point out that not the least of the functions of the medical societies is steadily to resist all impudent and reckless encroachments upon the proper practice of the profession under the law. With all the safeguards afforded by such organizations and state medical boards, there is still left much to be desired in the matter of purifying the profession and maintaining an ever-progressive standard.

It has been objected that a part of the membership dues are applied to a questionable use in that they go to make up a defense fund for those members charged with malpractice or who otherwise run afoul of the law. Here, again, is another flagrant instance of loose talk. In the first place, any physician charged with malpractice is entitled to a defense as a matter of right. Instances are too numerous of false and malicious charges, both of malpractice and other offenses, not to recognize the peculiarly exposed position to which the physician is subject. Why then, should he not avail himself of these means at hand as a pure measure of self-preservation?

In the second place, the profession at large has an abiding interest in the reputation of its members; if a reputable practitioner is falsely charged, it is no less the concern of the profession than if an unworthy and irresponsible member should bring disgrace upon it. Realizing that the status of the system depends upon its ideals as attempted by the personnel of membership, the society gives the weak-kneed practitioner his chance. He is made to feel that the privilege of association with earnest and reputable colleagues makes for his own professional uplift in a practical way without hypocrisy or humbug.

Since the very inception of professional associations generally, the cry has been raised, at intervals, that they are run in the interests of a certain specified clique. This ill-tempered and illogical criticism has long been the peculiar por-

tion of medical societies. By so far as a state society takes thought for its reputability, by just that far must it guard its membership. There are always those who deem their full duty to the society discharged upon the payment of their dues; if the conditions of eligibility are so lax as to encourage this view, they should not be heard to complain if other more earnest and enthusiastic members seek to direct the fortunes of the society so far as concerns approximating its ideals and objects. This brings us to the consideration of a very important point, namely: conditions of eligibility. When a medical student receives a degree from a reputable institution; has duly "walked" his hospital wards and has been passed by the state board, these milestones in his professional career simply mark the removal of so many disabilities; in the nature of things, they do not signify anything more than what they purport. If state societies would guard against an indifferent and inert membership, the remedy is not far to seek. Let them take the usual "milestones" for what they are worth and then impose additional conditions in the way of requiring some satisfactory test of professional excellence, such as obtains in Massachusetts or in the case of specialty societies. Such a course would speedily hush the cry of "clique," if indeed, it is worth heeding at all, and would tend to solidify a professional *esprit de corps* that today is not too closely welded.

Clinical and research work should progress hand in hand but the proper field of this endeavor should first be found in the county societies. The busy practitioner can give of his time just as the test tube man can give of his. Each in his way is making his necessary professional contribution to medical science but they should work together from the earliest possible opportunity for association; in this way each would be able to demonstrate his eligibility for membership in the state and national associations. Neither practice, clinics or laboratory work should alone be the test of what is meant by "research." All together should be considered. Early application to the study of local conditions; papers thereon; independent investigation, and theses, all furnish material for testing the eligibility of candidates.

It has been urged, time after time, that such tests of excellence are by no means infallible; that they are often misleading; that many able practitioners would be debarred from associa-

tion with their fellows if they were imposed. The answer to this is that all human tests are infallible. University examinations, bar examinations, medical examinations and those imposed in the army and navy are all open to the same objection but in the absence of any better criterion, the tests suggested persist today as the best experience can recommend.

Mention has been made of the societies of the specialists in the profession. Membership in all of the societies I am familiar with is made to depend upon some concrete evidence of eligibility other than the usual diploma and certificate.

Another important function of the state society is the insistence upon a nice adjustment of professional ethics, or perhaps, a more intelligent construction of them so as clearly to draw the line between the old-time conception that making a living is a mere incident to a doctor's obligations and the more modern idea that "pure altruism is as harmful as pure egoism." It has been repeatedly pointed out that the old attitude has given rise to that peculiar form of pauperism evidenced in the abuse of dispensaries. The physician, in common with other citizens, owes certain individual duties to the state and the community; he must support himself and his family and this without pauperizing others in the community.

It will scarcely be denied that the great object of the state society is, so far as in it lies, to keep medical education abreast of medical science. An examination of two recent epoch-making reports on medical education will disclose that there is, in fact, a wide gulf between the two. How to bridge that gulf is the concern of our and similar societies.

In the reports referred to and which may be taken as nearly trustworthy as the difficulties of the task of compiling them permitted, enough appears to convince even the most casual reader that an abolition of many of the minor medical colleges as well as the merging of others in many of the states is desirable. It is not our purpose to revive the old question as to whether the medical schools of the two great universities of New England should suffice for New England's medical education.

Finally, can the state medical societies attain to any higher goal than to keep the profession deserving of this eulogium by Robert L. Stevenson?

"There are men and classes of men that stand above the common herd: the soldier, the sailor * * * the artist rarely; rarelier still the clergyman; *the physician almost as a rule. He is the flower (such as it is) of our civilization, and when that stage of man is done with and only remembered to be marvelled at in history, he will be thought to have shared as little as any in the defects of the period and most notably exhibited the virtues of the race. Generosity he has, such as is possible to those who practice an art, never to those who drive a trade; discretion, tried by a hundred secrets; tact, tried by a thousand embarrassments; and what are more important, Herculean cheerfulness and courage. So it is that he brings air and cheer into the sick room, and often enough, though not so often as he wishes, brings healing.*"

A VERMONT PELLAGRA CASE.

BY

W. L. WASSON, M. D.,
Waterbury, Vt.

Aug. 23, 1912, F. D. S. male, aged 50 years, was admitted to the hospital (State Hospital for Insane) from Peacham, Vt. Very little history of his previous condition could be obtained further than to state that he suffered in the past for several years in the Spring time from attacks characterized in the main by "sunburn" like appearance of the hands accompanied by intestinal disturbances and diarrhea. He bore the reputation of being a tramp, was of inferior mental caliber, and lived in a hovel with another family of similar type, under conditions most unhygienic and filthy. Patient was very untidy when admitted to hospital, having soiled himself on the way. Signs of mental disturbance were first noted about three months prior to his admission to the hospital. When he reached the hospital he was confused and more or less delirious, conditions which grew in intensity until his death twenty-seven days later, on Sept. 19, 1912.

Following is an abstract of the bedside notes:

Aug. 27. Patient is in bed and takes liquid nourishment. He is not able to be up around, being generally feeble. He is also quite emaciated. While he was being admitted he filled the seat of one of the office chairs with a liquid stool. *Mentally*, he is apparently profoundly

demented. When asked where he is, said "Montpelier." *Memory* also practically blank for both recent and remote events. Said he didn't know how long he has been here. Pupils react slightly to light and knee jerks moderate in degree. Talks indistinctly most of the time. Wets bed frequently.

Aug. 30. Patient has had no movement of the bowels for nearly 24 hours. His abdomen is not bloated. The backs of the patient's hands are reddened and scaly and one or two small pus points are in evidence. The skin is thickened and furrowed over wrists. It is a dry, scaly condition, there being no exudation of serum. When tongue is protruded, lower jaw quivers, and there is at times a very pronounced retractile tremor of the tongue. Right pupil larger than left. They react to light. Perceptible tremor of hands, more so of fingers.

Sept. 5. Patient has a movement of the bowels every twenty-four hours, which more often than not is of a thin, yellowish diarrheal nature. Purulent discharge comes from penis.

Sept. 9. Several days ago patient was very *restless* and tumbled about in his bed, contracting his muscles and assuming constrained positions; sometimes lying with his head thrown back and mouth open, his *muscles being rigid*. When seen by the doctor, he seized him by the coat, hanging on till forcibly compelled to let go. He, at the same time, said: "I want to tell you about it." He then clutched the head of the bed, half rolled over, and clung there. Last night he again spent the entire time tossing about in muscular contortions. This morning he lies on his back, mouth open, pupils about as described; knee jerks lively, perhaps more so on the left side; mild ankle clonus on both sides. When soles of feet are stroked with a lead pencil no decided Babinski follows, but it is decidedly distasteful to patient and he makes many inarticulate cries of objection. He tries to put out his tongue when requested to do so, but it is quivering and shaking at a great rate, so that he fails to protrude it. Muscles of the face are all of a quiver, as are the muscles of the upper extremities. Muscular tremor is less evident in lower limbs.

Sept. 10. Patient was quiet last night but slept poorly. This morning there is a more or less general muscular twitching. As doctor looked at him he lay with mouth open and with the platysma forcibly contracted.

Sept. 25. Patient died on Sept 19th, and an autopsy tended to confirm the diagnosis of *Pellagra*. For several days before he died he had spasmodic contractions of the muscles over the whole body, and at times he looked very much as if he were suffering from strychnia poisoning. He gradually subsided into a stupor, and for the last eight or ten hours of his existence was apparently unconscious of his surroundings.

Blood pressure 110 m. m. hg. Hemoglobin 90%, pulse 80, respiration 20. For the first few days after admission temperature was normal, thereafter it was slightly below normal.

Died Sept. 19, '12 at 5:00 P. M. Autopsy, Sept. 20th, 15 hrs. after death.

General Appearance, a tall, much emaciated, white male; rigor mortis marked; mouth wide open; mouth dirty and brown; skin of hands has lost hyperemic appearance present during life, are dry, somewhat scaly and fissured in places. Some thickening is evident in places. Forehead narrow and sloping; hair thick and coarse, sprinkled with gray. On opening abdomen peritoneum is shiny and free from adhesions; no fluid in abdominal cavity.

Appendix normal in appearance.

Intestines: Entire length of small intestine shows well marked hyperemia, but no evidence of ulceration or hemorrhage. Mesenteric glands not particularly swollen. Stomach somewhat dilated, but contains very little material.

Diaphragm: 5th rib on the right side, 4th interspace on left. Lungs collapse on opening chest cavity.

Left Lung: 577 gms. Free from adhesions, posteriorly passive congestion and edema are evident in moderate degree.

Right Lung: 377 gms. Organ is firmly adherent throughout so that tissue at base of lobe has to be torn when organ is removed. Congestion and edema as on opposite side.

Heart: 230 gms. About one ounce of clear, straw colored fluid in pericardial sac; muscle firm, several milk spots of epicardium; vessels somewhat tortuous. On being sectioned the walls of ventricles are of good thickness, coronaries free from atheroma; valves normal.

Left Kidney: 130 gms. Organ removes with some difficulty owing to being firmly bound in place; capsule tears away during the opera-

tion of removal. Organ presents a dark, congested, granular appearance. The surface is disfigured by numerous cysts, large and small; cuts with increased consistency. Cortex not markedly thinned; markings indistinct; cut surface congested.

Right Kidney: 117 gms. Condition much the same as left organ; cysts not so numerous as on other side.

Ureters: Free, and not dilated.

Bladder: Walls somewhat thickened, mucosa, especially about base inflamed; blood vessels distended with blood. A small quantity of turbid, milky fluid present. Urethra free from ulceration or stricture. *Prostate* normal in appearance.

Liver: 1,375 gms. Relatively, the organ looks enlarged; externally it is mottled, purplish with yellow spots and streaks; cut surface shows same appearance, viz.: yellowish mottlings. Lobules fairly distinct.

Calvarium: Somewhat thickened; diploe well preserved; supraciliary ridges prominent; frontal sinuses large; dura strips easily from brain; pia not particularly congested; a few minute opacities near large blood vessel of parietal lobe.

Brain: Fourth ventricle smooth and shiny; convolutions narrow, especially in frontal region; choroid negative; sections through frontal parietal, temporal, crura, pons, medulla, and cord negative; vessels remarkably free from atheroma.

Anatomical Diagnosis: Plural adhesions, congestion and edema, enteritis, cystitis, kidneys, sclerotic and cystic.

Microscopically: The brain exhibits no perivascular lymphocytosis; no neuroglia increase; nerve cells are poor in nissl substance, which is broken up and powdery; nuclei well preserved and centrally placed for the most part; very few cells obviously swollen; cells of cornu ammoni not markedly changed. Nuclear cells of medulla are extensively and profoundly affected, most of them are swollen and exhibit varying degrees of degeneration. Nissl substance deficient and broken up, nuclei are displaced toward periphery, and in a number of nuclei bulge out margin of cell as if about to be excluded; a few cell remains exhibit no nuclei. The latter picture may be due to the line of incision made by the knife when the section was cut, not including any portion of the nucleus rather than from an

absence of the nucleus in the cell. The large cells of the spinal cord show similar, though less extensive changes than those of the medulla. Spleen, negative; prostate negative; kidneys show moderate congestion, areas of round cell infiltration, a large number of sclerosed glomeruli, fragmentation and degeneration of tubule cells, irregular increase of connective tissue; no characteristic change in liver; nothing remarkable about intestines beyond changes associated with a mild enteritis.

ERADICATING ROCKY MOUNTAIN SPOTTED FEVER.

The work of clearing the mountains and valleys of the spotted fever district in Montana, inaugurated some years ago, is still being carried on vigorously. Since the death of Dr. McClintic, who contracted the fever while working in Montana, Dr. L. D. Fricks of the United States Public Health Service has carried on the work in the Bitter Root Valley. The infection in its most virulent form exists in certain districts on the west side of the Bitter Root River, a region still in the primitive state. On the east side of the river, where the territory has been cultivated and where most of the efforts to eradicate the tick have been employed, there are comparatively no ticks; but in small portions of the territory on the west side the ticks exist literally in millions and their eradication by the usual methods seems almost hopeless. It is found, however, that the ticks do not flourish for any considerable length of time in the region pastured by sheep. Ticks recovered from sheep grazing naturally over the tick-infected territory were dead. Sheep seem to be particularly unsuited for tick propagation. Comparatively few ticks, either dead or alive, were found on the sheep after they had been shorn. Fricks proposes to test the method in the coming season by placing a flock of two thousand sheep on some tick-infested range on the west side of the Bitter Root River as early in the spring as possible and thus determining on a large scale the possibility of tick eradication by this natural and inexpensive means. The fatal character of this disease in otherwise extremely desirable agricultural and stock-raising sections of the country, such as those of Montana, Idaho and Wyoming, makes it important that some means should be devised to get rid of the ticks. The experiments with the sheep seem promising and point to a plan of eradication feasible and easily carried out.

Vermont Medical Monthly.

A Journal of Review, Reform and Progress in the Medical Sciences.

H. C. TINKHAM, M. D., }
B. H. STONE, M. D., } *Editors.*

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BURLINGTON, VT., DECEMBER 15, 1913.

EDITORIAL.

Everyone now realizes the importance of public health. That this means community and individual prosperity and happiness no one doubts. There is little difficulty in getting any reasonable health regulations passed or in obtaining appropriations to carry on public health work. The proposition that public health is purchasable is generally believed, but the fact that it is only purchasable at the expense of the careful, conscientious, and often self-sacrificing efforts of every individual is not so generally appreciated. We are too apt to think that when we have passed laws and provided appropriations to support health officials, that our personal responsibilities have ended. In the complexity of modern society we cannot individually protect ourselves from infection, and so to watch and control the common avenues by which disease is usually communicated, we employ for the community, a health officer. The health department is a department created and supported by the people to look after the community's health, to protect them and their neighbors from unnecessary exposure to sickness. The health department is your department, doing the things for you that you cannot do yourself. The health department and its work represents the desire of the people to avoid disease, to live useful, wholesome lives, to protect themselves, their children, and their families. It represents not

only the self-interest of the individuals, but their altruism as well. It represents one of the finest products of our civilization, the realization that health is a right of every man and that the preservation of one's own health and that of his neighbor is a moral duty.

But the work of the sanitary official can only attain its greatest efficiency as the individuals of a community cooperate with him. Every individual should know the work of the health officer; should realize the extent to which this department is protecting him and those dear to him, and he should realize that by carelessness in his own person, premises or household, he can nullify, to a large extent, any good that this official can do. When life was simple, when each household was to a much larger extent sufficient to itself, individual responsibility was not so great, but now with the greater interdependence of modern life, avenues of exchange for infection have eminently increased. The baker, the barber, the groceryman, the milk supply, the water supply, the street car and the public concert hall, theatre, moving picture hall, schools, common drinking cups, towels, and combs, are a few of the countless ways in which disease may be spread from one to the many, and the careless individual who fails to observe the golden rule, and fails to report a case of infectious disease, goes himself or allows his family to go among others when he has reason to suspect the presence of a communicable disease, however trivial, may do more harm than the most debased murderer of Whitechapel fame.

The announcement of the establishment of a school for health officers under the combined supervision of Harvard University and the Massachusetts Institute of Technology, marks a distinct epoch in the development of sanitary science in this country, and these schools are to be congratulated on their wise foresight in early meeting the growing demand for technical education along the lines of this broad subject of preventive medicine. The school is under the directorship of Dr. M. J. Rosenau, formerly with the public health service at Washington, and for some time holding the chair of preventive medicine in Harvard University. The circular announcement is interesting as showing the scope of the course, and as indicating the

special knowledge which the modern municipal health officer should possess. The catalogue announces forty-one distinct courses gathered in nine groups, as follows: Preventive medicine; personal hygiene; public health administration; sanitary biology and sanitary chemistry; special pathology; communicable diseases; sanitary engineering; demography; medicine, and other sciences. In the course given in these groups are the following: Public health problems; relation of animal diseases to public health; infant mortality; genetics and eugenics; tropical dermatology; school hygiene; venereal prophylaxis; prevention of diseases of the ear; intestinal hygiene and sanitation; municipal sanitation; bacteriology of water and sewage; climatology; biology of infectious diseases; board of health diagnosis, and many other courses barely touched upon in the ordinary courses. It is safe to say that this school will be a success. The more progressive cities are demanding men of special training. The truth that public health is purchasable is being driven home, and the further fact that it can not be bought by any mean, money-tight policy is also being appreciated.

NEWS ITEMS.

Dr. B. C. White has sold his practice in Briguewater, Vt., and has located in Brattleboro.

Dr. Howard Lathrop, 101 Beacon Street, Boston, has just sued Suffolk County for \$635, the amount of his fees for operating on the Rev. Clarence V. T. Richeson, and subsequent medical attention while he was confined at the Charles Street Jail. Dr. Lathrop charged \$500 for the operation after Richeson had mutilated himself, and \$5 each for the twenty-seven visits afterwards.

Dr. H. C. Holbrook of Penacook, N. H., whose health has not been good of late has gone to California for the winter.

Dr. Harvey Cushing, surgeon-in-chief of the Peter Brigham Hospital, Boston, stated in a lecture at the Harvard Medical School recently, that the white ceiling, floor and side walls of an operating room, as well as the white uniforms of the attendants, reflected the light, and he explained the effect upon the eyes. Many surgeons, he said, were coming to the belief that the upper

section of an operating room should be light, the lower section dark and the supplies gray.

At the recent election in Oregon the measure for the sterilization of habitual criminals was defeated. All other legislative enactments referred to the voters were approved. Oregon is a referendum state.

Dr. Charles S. Collins of Nashua, N. H., aged 60 years, died Nov. 16. He was the proprietor of the large mineral spring, the waters of which have been recently advertised extensively.

The sterilization law recently passed in New Jersey has just been declared unconstitutional by the supreme court of that state. The act provided for the sterilization of epileptics, feeble-minded criminals and other defectives.

Dr. C. R. Walker has resigned as physician to Saint Paul's School of Concord, N. H., and is succeeded by Dr. C. R. Metcalf. Dr. Walker has held the position for nearly twenty years.

Dr. Arnold W. Moore, Boston University, 1913, has located in Penacook, N. H.

Dr. O. H. Stanley who has recently been in Portland, Me. has located in Concord, N. H.

Dr. Louis J. Pons, U. V. M. 1885, has moved from Roxbury, Conn. to Milford, Conn.

The June issue of the *American Medicine* is dedicated to Dr. Abraham Jacobi.

The Governors of the New York Skin and Cancer Hospital announce that Dr. L. Duncan Bulkley will give a fifteenth series of Clinical Lectures on Diseases of the Skin, in the outpatient hall of the hospital on Wednesday afternoons, beginning November 5th at 4:15 o'clock. The lectures will be free to the medical profession on the presentation of their professional cards.

The fifth annual convention of the association of Feed Control Officials of the United States was held at Raleigh Hotel, Washington, D. C., November 17th and 18th.

"DELEERIOUS AULD DEEVIL."

Story of the Workmen Who Followed Instructions.

Glasgow, Scotland, Nov. 13.—The death of Sir John Batty Tuke, the eminent mental special-

ist, recalls a story which he was fond of telling against himself.

Some repairs were in progress at the genial knight's private asylum near Edinburgh, and the workmen engaged had been strictly enjoined not to converse with any of the patients. One morning Sir John appeared on the scene, says the *Notes*, and addressed a casual query to a painter, which merely elicited a stony stare.

A repetition of the question was likewise treated with silent contempt, and Sir John was beginning to give visible expression to his indignation when the workman retorted: "Awa' wi' ye, ye deleerious auld deevil, I canna be bothered wi' ye."

Then, as if reflecting that his remonstrance was too crushing, he added in a gentler tone. "But I'm sorry for ye a' the same."

WOMEN HEALTH OFFICERS.

Training for Them Refused in Two Colleges.

Harvard University and the Massachusetts Institute of Technology have jointly started a new course in preventive medicine, with a special view to training people to become health officers. The Institute of Technology admits women, yet from this course women are excluded. One able woman came all the way from the State of Washington to take it, with the intention of carrying back to the Pacific coast the best information to be had along health lines. Another woman came from Michigan, taking it for granted that women might enter. Both found the doors shut in their faces.

Women are eligible as health officers not only in the ten states where they vote, but in a number of states where they do not. A distinguished Boston surgeon said only last week that every board of health ought to have at least one woman on it, because women notice the small details which men are apt to overlook, yet which have a very real importance to the public health. Preventive medicine is a field especially adapted to women, whether as health officials, settlement workers, or mothers interested in safeguarding the health of the families in the home. To bar out women from such a course is not only unjust but stupid—a wrong to the general public as well as to the women. It is a thousand pities that in respect to this course, arranged by Harvard and the Institute of Technology jointly, the

antiquated tradition of Harvard has prevailed over the more modern and enlightened custom of the Institute.—*Woman's Journal*.

Prof. Landonsey, Dean of the Faculty of Medicine and one of the most eminent champions of the social war against tuberculosis, demonstrated at the Academy of Medicine Nov. 28 the tuberculous nature of varicose veins. Heretofore this condition has been taken for a rheumatic manifestation.

Prof. Landousey revealed microscopically in lesions the famous bacillus. He also showed that inoculation of a guinea pig produced tuberculosis in the animal.

At the same meeting, Prof. Pierre Marie of the Salpetriere Hospital, demonstrated that in cases of softening or hemorrhage of the brain, trepanation brought relief and held out hope of a cure. It should take place on the side opposite the lesion. Otherwise he saw there were risks of aggravation.

The recent tragedy at Cholet, France, where dozens of persons died after partaking of a wedding supper, has resulted in a scientific discovery—that of the "bacillus hypertoxicus," which was found in the cream eaten by the wedding guests, by Dr. Rappin of the Pasteur Institute of Nantes, who was summoned for the investigation.

He found the same bacillus in the blood and excretions of the victims. A guinea pig inoculated with it died in a few hours.

Dr. Rappin says that the new bacillus is terribly fatal, and belongs to a new species not yet classified. Nothing is known of its habits or the conditions in which it lives and develops. Dr. Arnold Netter of the Academy of Medicine says:

"Dr. Rappin has often spoken to me of mysterious poisonings followed by death and due to an unknown bacillus. This microbe must belong to the family of perdaos, and must be allied to that of paratyphiques, but it preserves a distinct individual pathological effect."

The Pasteur Institute confirms the discovery of Dr. Rappin.

Dr. William H. Fitzgerald, a native of Middlebury who was graduated from the Medical Department of the University of Vermont in 1885

is credited with being the discoverer of a method of producing local anesthesia without resorting to dangerous drugs, according to a news despatch in Saturday's *New York World*. The demonstrations were made at Hartford, Conn. The *World's* despatch says:

In the presence of 24 prominent surgeons of this city, Dr. William H. Fitzgerald, an ear and throat specialist of this city, who formerly practiced in New York City, demonstrated a new anesthesia at St. Francis' hospital this afternoon.

Instead of using drugs or gas Dr. Fitzgerald applies pressure to the nerves. He has used the method occasionally in his private practice with satisfactory results, but has only just developed it to a point where he would use it in general hospital practice.

The method of anesthesia practiced by Dr. Fitzgerald is based on the known fact that there are areas in the nose, throat and mouth that are highly sensitive and which contain delicate and intricate nerve sources. It was by study of the zones that Dr. Fitzgerald worked out his discovery, the method of applying which he demonstrated in so startling a way at the clinic.

We announce the birth of a new medical journal, *The Pennant*, No. 1, Vol. 1, issued November, 1913, by the North Dakota Anti-Tuberculosis Association.

OPENING OF A NEW EYE HOSPITAL.

The Hermann Knapp Memorial Eye Hospital has opened its doors in its new location, at the S. W. corner of 57th Street and Tenth Avenue, New York.

The hospital was founded in 1869 by the late Dr. Hermann Knapp, and under the name of the "New York Ophthalmic & Aural Institute" it has been in interrupted activity at 44 and 46 East 12th Street. During these forty-four years over 420,000 patients have been treated. The new building is a specially constructed seven story, fire-proof hospital building, with complete modern equipment for the treatment and study of diseases of the eye.

The Board of Trustees has deemed the occasion of its removal to a new building in a new location the proper time to change the name of the Institute in honor of its distinguished founder.

MINUTES OF THE ONE HUNDREDTH ANNUAL MEETING OF THE VERMONT STATE MEDICAL SOCIETY, HELD AT BURLINGTON, OCTOBER 8-10, 1913.

WEDNESDAY, OCTOBER 8th,
FORENOON SESSION.

The meeting was opened in the auditorium of the Medical College building, at 11 A. M., President B. H. Stone of Burlington, presiding.

Prayer was offered by Rev. I. C. Smart of Burlington.

The minutes of the last meeting were read by the Secretary, C. H. Beecher, and on motion were accepted.

The report of the Local Committee of Arrangements was made by Dr. C. A. Pease.

The report of the Secretary was made by Dr. C. H. Beecher, and was accepted and referred to the House of Delegates.

The Treasurer, Dr. C. F. Dalton, made his report, which in the absence of Dr. C. A. Cramton, the Auditor, was referred to the House of Delegates.

The report of the Executive Committee was read by Dr. C. H. Beecher, in the absence of Dr. H. A. Barrows, and on motion was accepted.

The report of the Publication Committee was read by Dr. C. H. Beecher, and on motion of Dr. C. F. Dalton was accepted.

The report of the Legislative Committee was read by Dr. F. W. Sears, and on motion was accepted and referred to the House of Delegates.

The Medical Education Committee's report was read by Dr. Beecher in the absence of Dr. Havens, and on motion of Dr. Clark was accepted and referred to the House of Delegates.

Dr. Pease reported as follows for the Committee of Arrangements:—The main thing about this arrangement is the program which has been arranged for the ladies and the first thing in the program is a complimentary entertainment given at the Majestic Theatre at 2.30 o'clock P. M. They have arranged a special program for that time and the ladies had better meet at the theatre about 2.10 P. M. and there will be some member there to give out the tickets. This evening there is to be a public address: "Progress in Medicine and the Public Welfare" at the Y. M. C. A., followed by the President's Reception held in the parlors of the Hotel Vermont and an informal dance on the Roof Garden of Hotel Vermont after the President's Reception, to which the members, guests and ladies are invited. There will be no special entertainment for the ladies tomorrow forenoon (Thursday).

Dr. John B. Deaver's "Surgical Clinic" will be held tomorrow morning at 8.30 o'clock and it is requested that all members will be there as promptly as possible as he has to leave on the noon train, and the time will be limited.

Following the "Surgical Clinic," there will be a special car waiting at the hospital to take the guests to the New Sherwood about 12.10 where a luncheon will be served to the members of the Society by the local physicians. There will be a special car leaving there at 1.45 P. M. so as to be back here in time for the afternoon session at 2.00 o'clock.

A group picture will be taken at 2.00 o'clock tomorrow (Thursday) afternoon in front of the college. Tomorrow afternoon (Thursday) there will be a "Medical Clinic" by Dr. Gilman Thompson of New York.

Thursday evening at 7.30 o'clock there will be the regular banquet served at the Hotel Vermont. This is given by the State Society and a ticket will be given to every member and there will be no charge for the banquet to the members or their ladies and tables seating from 4 to 10 may be reserved at any time up to 5 o'clock tomorrow through Dr. C. A. Pease or at the hotel desk.

At 1.00 P. M. (Thursday) the ladies will leave the Hotel Vermont by automobile for the Lake Champlain Yacht Club, where Mr. Wilder will give a musical. A luncheon will also be served. There will be an automobile ride for the ladies leaving the hotels at 10.00 Friday.

Friday noon, there will be a luncheon served at the Van Ness House for members at 12.30 P. M. and a special car will leave at 12.10 to get there.

At 1.40 a special car will bring them back to the afternoon session. Luncheon will be served in the Grill Room of the New Sherwood for the ladies at 12.30 P. M., Friday.

The report of the Necrology Committee was read by Dr. Beecher in the absence of Dr. W. F. Hazelton, Chairman of that Committee, and on motion was accepted.

Dr. E. A. Hyatt read the report of the Medico-Legal Committee. It was discussed by Dr. Pease and the Secretary, and on motion accepted and referred to the House of Delegates.

The reports of the Centennial Committee, Committee on a Tri-State Journal, and that of the Committee to consider the purchase of the VERMONT MEDICAL MONTHLY were by request of the President accepted as printed without a formal reading before the Society, and referred to the House of Delegates.

The report of the committee appointed to investigate the decrease in membership was read by Dr. J. M. Hamilton, and on motion was accepted and referred to the House of Delegates.

There were no reports of Delegates to other Societies.

The meeting then adjourned until the afternoon session.

WEDNESDAY AFTERNOON.

The meeting was called to order by the President at two o'clock, after which he extended words of welcome and the privileges of the floor to visiting delegates. The following delegates from other Societies responded to the roll call by President B. H. Stone:

Dr. Payne, Rhode Island—"It gives me great pleasure to bring greetings from this the smallest state in the New England group. We have looked forward with great pleasure to this meeting.

Rhode Island has just completed a new state home; we have a home now for our medical society; this practically means that we always meet in Providence as Providence is practically Rhode Island. We would like to have you send your representatives down to Providence to our meetings."

Dr. Sylvester from Maine—The State of Maine and the Maine Medical Association sends sincere and

heartiest congratulations to the Vermont State Medical Society for having completed 100 years of such an honorable organization. We have very much in common with you in our all being New England Yankees. The three northern New England States very chiefly are responsible for the preservation of the ideals and the home of the Yankee. We have adopted many of the graduates of your State Medical School and I wish to assure you they have a very honorable record. We wish to take this opportunity to tell you that we heartily appreciate this occasion and we shall be glad to help it along.

Dr. Fowler, representing New Hampshire—Mr. President and Gentlemen: I bring greetings of the New Hampshire State Medical Society to this your one hundredth anniversary and I assure you we enter heartily in all your entertainment and we thank you for the cordial reception which we have received.

Dr. Cogswell, Connecticut—"Mr. President and Members of the Vermont State Medical Society: I come from a very good state, not as good as Vermont perhaps, but we have nothing wooden about us except it may be our nutmegs. I wish to bring greetings from the Connecticut State Medical Society to the Vermont State Medical Society, it is a great pleasure to be here. I had a most delightful trip yesterday, coming with my wife.

I have been very interested in what was said this morning about keeping the county societies alive. You want not only a very live secretary but you also want a very live president. We have adopted the plan of having the president and some of the other officers of the State Society visit the County Society, and that has added a great deal of interest especially in the small societies, in this way we have found that we are gaining in membership. Our dues are five (5) dollars a year; there are a few who find it hard to pay that amount, but after reaching the age of seventy years and having been twenty-five years a member of the society, they are exempt.

Again let me assure you that it is a great pleasure to me to be here, and I bring hearty greetings from Connecticut."

Dr. Varney, New York—"Mr. President, and Members of the Society: In listening to the calling of the roll, as you went down the line I didn't know but New York was going to get ahead again. If it hadn't been for little Rhode Island and Connecticut I began to think I was the only delegate present. It gives me great pleasure to bring greetings from the New York State Medical Society to the Vermont State Society. As the doctor has just remarked before me, I have looked forward with great pleasure to this meeting. We had a very enjoyable trip, coming by auto, my wife and I, and a more beautiful day none of you have seen for a long time. Old Vermont has a very tender spot in my heart; the University is my Alma Mater and I always return to it with a great deal of pleasure. Again I thank you."

Dr. Downing, New Hampshire—"I bring greetings from the State Society of New Hampshire to the State Society of Vermont."

Dr. H. O. Marcy, Boston—"I like to come to Vermont because I come home. You adopted me into this Society years ago, and I consider it one of the greatest honors given me in the medical profession. I am here to be taught, and if my friend Craig will go on with his teaching, we will all feel, I am sure, that we want to make him a Teacher Emeritus."

REPORTS OF OFFICERS AND COMMITTEES OF
VERMONT STATE MEDICAL SOCIETY, 1913.

SECRETARY'S REPORT.

To the members of the Vermont State Medical Society:

I take pleasure in presenting this my sixth annual report.

The membership of the society is distributed as follows:—

Addison 26, Bennington 12, Caledonia 32, Chittenden 62, Franklin 32, Lamoille 8, Orleans 4, Rutland 55, Washington 48, Windham 22, Windsor 5. Making a total membership of 306. This is the same as last year. There have been 4 deaths, 1 has resigned, 57 have been dropped for nonpayment of dues. Making a total loss of 62. Thirteen new members have been added and 49 have been reinstated, making 62 additions and leaving the number the same as last year.

The report of the committee on decrease in membership should be thoroughly discussed.

Since the county society is the basis of our organization I believe it to be of utmost importance for the State Society to pay considerable attention to our county societies, more than the present Secretary has been able to give.

The most important factor in the maintaining of a live county society is the county secretary since he will have to take the blame for the failure or get the credit of the success of the local organization.

I believe that in the counties where the society membership is small in numbers and not enthusiastic in support either of the local or State Society, it would be well to drop that society and let its members take advantage of membership in a live adjacent county society.

A conference of State Secretaries was held in Chicago, Oct. 23 and 24, 1912, the expenses being paid by the American Medical Association. I attended, and I am sure all who did attend received much benefit from the meeting. The following recommendations were unanimously adopted:

1. We recommend that this conference endorse the plan of having the fiscal year coincide with the calendar year in all parts of the organization. We further recommend that secretaries of all state associations which have not already adopted this provision bring this matter to the attention of their associations and recommend its adoption.

2. We recommend that constituent state associations adopt provisions making dues in county societies payable on January 1 of each year, and requiring county secretaries to report to state secretaries all members in good standing, together with their per capita assessment for the current year not later than March 31. State societies desiring to do so may provide a shorter period.

3. The recommendation regarding the third question under discussion is covered by our recommendation of the second.

4. Regarding the pro-rating of dues, we recommend that this be made optional with each local society.

5. Regarding an admission fee for membership we recommend that this be made optional with local societies.

6. While the committee recognizes, as a general principle that a uniform system of blanks for county and state societies is desirable as soon as practicable, we recommend further consideration of this question at a later conference.

7. We recommend that the House of Delegates of the American Medical Association be asked to consider the advisability of issuing charters to constituent state associations.

8. We recognize the desirability and advantage of a uniform method of transfer, but this system cannot be established until there has been developed a greater uniformity in other details of organization. We therefore recommend that this question be made the subject of discussion at a future conference.

9. The committee recognizes the value of this conference to the state association secretaries, and to the purposes of organization. It therefore recommends that future conferences of this character be held.

By-laws covering these recommendations will be introduced at the meeting of the House of Delegates and should be adopted.

On account of the pressure of other work must decline to serve you further as Secretary. I appreciate the honor you have repeatedly given me and trust my successor may have as loyal and enthusiastic support.

Respectfully,

C. H. BEECHER.

REPORT OF THE TREASURER, VERMONT
STATE MEDICAL SOCIETY.

RECEIPTS.

Balance on hand, Oct., 1912	\$2,246 67
Received from Addison County Society	124 00
“ Bennington County Society.	44 00
“ Caledonia County Society.	136 00
“ Chittenden County Society..	310 00
“ Franklin County Society....	128 00
“ Lamoille County Society....	32 00
“ Orleans County Society	16 00
“ Rutland County Society....	236 00
“ Washington County Society.	208 00
“ Windham County Society....	124 00
“ Windsor County Society....	44 00
“ Geo. C. Averill, Trustee, Trust Fund	65 00
“ Dr. Lindsay, Balance 1912 meeting	23 74
“ Interest on savings bank deposit	41 68
	<hr/>
	\$3,779 09

EXPENDITURES.

Paid Mrs. C. E. Hunt on 1912 meeting.....	\$ 35 00
“ Dr. J. F. Anderson, trust fund interest and expenses	107 00
“ Dr. Judson Daland, expenses	33 50
“ H. L. Thomson, for lantern at Montpelier	9 31
“ Lane Press, printing	65 25
“ Susan R. Nott, reporting meeting....	23 00
“ Pavilion Hotel, balance 1912 meeting....	29 00
“ Burlington Med. Pub. Co., Journal ...	500 00
“ Warren R. Austin, services as attorney	73 14
“ N. E. Tel. & Tel. Co., tolls	9 56
“ Louis M. Converse, clerical work and postage	53 03
“ Western Union Telegraph Co.	3 86
“ Dr. Wm. Stickney expenses to conference	75

Paid Dr. H. Miltimore, expenses to conference	7 08
" Dr. C. W. Kidder, expenses to conference	5 91
" Dr. C. H. Beecher, salary	50 00
" Dr. B. H. Stone, expenses to Brattleboro	11 17
" Dr. F. W. Sears, expenses to Montpelier	5 00
" Vt. Business College, addressing, etc...	3 34
	<hr/>
	\$1,024 90

Balance on hand, October 8th, 1913	\$2,754 19
On deposit, Burlington Savings Bank ...	\$1,073 56
Checking account, Burlington Trust Co. 1,680 63	
	<hr/>
	\$2,754 19

Respectfully submitted,

CHAS. F. DALTON, Treasurer.

REPORT OF EXECUTIVE COMMITTEE.

To the members of the Vermont State Medical Society:

The executive committee named Drs. Pease, Arnold and T. S. Brown as the Local Committee of Arrangements.

There have been several conferences with them and the special Centennial Committee with the resulting program and arrangements as printed.

Respectfully submitted,

H. W. BARROWS,

C. H. BEECHER.

REPORT OF PUBLICATION COMMITTEE.

To the members of the Vermont State Medical Society:

We have continued during the year past the same plan of previous years in the publication of the "Transactions," i. e., paying the VERMONT MEDICAL MONTHLY four hundred dollars, for which they have sent the journal in which the proceedings and papers have been printed in installments, to each member for the year and a bound volume of the Transactions to the members desiring a copy.

In view of the other reports to be presented bearing on the subject we refrain from recommendation of policy on the continuance of this plan at this time.

Respectfully submitted,

C. H. BEECHER,

DAVID MARVIN,

F. E. FARMER.

REPORT OF LEGISLATIVE COMMITTEE.

Your committee on legislation begs leave to present the following report:

The only bill which came before the last Legislature in which the society was especially interested as a society was that providing for an extensive revision of the charter. This bill passed without opposition.

In October, 1912, the secretary of this Society sent to the Governor the credentials of Drs. Hammond and Doane, the two members nominated as candidates for the Board of Medical Registration. Through an oversight the name of the President of the Society was not signed to these recommendations, and before the mistake was discovered and remedied, the time limit had expired. The Governor, taking advantage of this technicality, and violating the intent of the law, appointed Dr. Bates of Morrisville. Your committee is not in any way adversely criticising the appointment for it was probably an admirable one, but is mentioning the facts in view of what follows. The consideration of this affair led to the formulating of a bill in the judiciary committee, taking away from the State Medical Society the power of nomination and vesting the appointment entirely with the Governor on the ground that as he had to bear the responsibility, he should have a free hand to appoint whom he pleased.

Your committee strenuously opposed this change and maintained that the present bill is a good one, first because it takes the office out of politics. It can not be bestowed as a reward for political services. Second, it obviates the danger of a lay appointment of a professional man for strictly professional duties which is always undesirable as the layman is not a good judge of professional qualifications. Third, it gives to the Governor a sufficient power of choice. If, for any reason, he thinks one of the men unfitted for the office, he has the privilege of appointing the other.

The chairman of the judiciary committee after hearing the argument of your committee, very courteously agreed to withdraw the bill.

Respectfully submitted,

FREDERIC W. SEARS, Chairman,

EDWIN A. HYATT,

E. A. COLTON.

October 8, 1913.

REPORT OF COMMITTEE ON MEDICAL EDUCATION.

To the members of the Vermont State Medical Society:

Your Committee have carefully read the annual report of the Council of Medical Education of the American Medical Association and the editorial on "Medical Education in the United States," in "The Journal" of the Association and note with pleasure constant improvement in everything pertaining to medical education. While the small number of medical students in the United States for the past year, a decrease of 2,771 below the number of last year and the small number of medical graduates, a decrease of 502 in twelve months, might seem to indicate less interest than heretofore in the study of medicine, the fact really is that the smaller number of students and fewer graduates is due to higher requirements for admission to colleges and more rigid examinations for graduation. In the past year fourteen medical colleges have either suspended or merged with others, and two new ones have been organized, leaving 106 medical colleges now existing. While the total number of colleges is growing smaller and approaching more nearly the normal for this country, it is encouraging to note that the number of high-grade, stronger medical colleges is constantly increasing. In 1904 only four medical colleges re-

quired preliminary education in advance of the usual high-school education; now there are fifty-three requiring one or more years of advance college work and twenty-eight others which begin the higher requirements next year. The colleges have been remarkably improved also in regard to buildings, new laboratories, better equipment, larger hospital facilities and, most important, more and better full-time, salaried instructors. The next great wave of improvement, and which has already begun, is the establishing of closer relationship between hospitals and medical schools, whereby each of the hospitals will have on its attending staff the most skilled physicians who are engaged in teaching and research, and the medical schools will possess a teaching hospital where students may see and study patients at the bedside. This undoubtedly means that the hospitals will be conducted on more modern lines, that medical students will be given better training in examination and care of patients and, last but not least, it means that the public will in future be supplied with better qualified physicians. For details regarding present condition of medical education in this country you are respectfully referred to pages 569 to 603 of the August twenty-third number of "The Journal" of the American Medical Association, from which your Committee have taken the substance of this report.

Respectfully submitted,

WALTER L. HAVENS,
J. M. ALLEN,
L. W. BURBANK.

REPORT OF NECROLOGY COMMITTEE.

To the members of the Vermont State Medical Society:

The following deaths among members have occurred during the year:

C. B. Wilson of Groton died May 13, 1913. E. S. Albee of Bellows Falls died May 14, 1913. J. H. Winch of Northfield died March 28, 1913. H. L. Townsend of Bridport died February 27, 1913. Obituaries are being prepared for publication in the "Transactions."

The death of a former member who was president of the society in 1881 also occurred. We refer to O. W. Sherwin of Woodstock. His death occurred April 18, 1913. An obituary appeared in the May number of the MEDICAL MONTHLY.

Respectfully submitted,

W. F. HAZELTON,
C. L. IRWIN,
R. E. WELCH.

REPORT OF MEDICO-LEGAL COMMITTEE.

To the Vermont State Medical Society:

Your Medico-Legal Committee has met all together once during the year, and all matters concerning the work and the cases then under our care were taken up with the attorney for the society, and thoroughly discussed.

Three cases have come to your committee for attention during the year. It is most worthy of note in connection with these three cases that they are all of such character as might come to any practitioner within the State. One being for performing an

autopsy without consent having been previously obtained. One for the setting of a broken leg, although the case was under the care of the physician being sued, not over thirty-six hours, and the third for alleged maltreatment of a case of pneumonia. All of these cases are entered in the courts for trial, one each in three different counties. A more detailed account of these cases may be gotten from a letter from the attorney to the secretary of your committee, which letter is made a part of this report.

During the present year a little less than \$100 has been expended for this work, and during the three years of its existence not over \$250 has been expended. Hence there remains in our treasury a goodly sum accumulating for the protection of these cases as they arise.

At the meeting of the committee before referred to it was decided to ascertain what was being done by other states in regard to this work. Your secretary was sick, however, during July and August and hence the inquiry was started too late to gain much information. Of the New England states, only Massachusetts has a system of protection from malpractice. Her system is very similar to our own. It has been in operation for five years. During the past year they have disposed of seven cases and have two pending. During the five years they have expended a total of \$1,775.96.

The secretaries of the State Societies of the other four New England states write me that the matter is under consideration, but has not yet been adopted by the society.

Respectfully submitted,

EDWIN A. HYATT.

Secretary Medico-Legal Committee.

October 3, 1913.

DR. E. A. HYATT.

Secretary of Medico-Legal Committee,
Vermont State Medical Society,
St. Albans, Vt.

Dear Doctor:

According to the suggestion of the house of delegates, made October 10, 1912, at its annual meeting at Montpelier, I prepared "An Act to Reorganize the Vermont Medical Society, and to Amend an Act to Incorporate the Vermont Medical Society, Passed November 6, 1813, as Amended by an Act in Addition to an Act Entitled 'An Act to Incorporate the Vermont Medical Society,' Passed November 2, 1814," which passed the Legislature at the last session with some slight changes, and was signed by the Governor, and will be effective if adopted by The Vermont State Medical Society.

Three suits of malpractice have been commenced during the year, and are now pending, to wit:

Mrs. Frank Chaussee vs. Dr. John Gihson, Franklin County Court; L. Kelton vs. Dr. H. L. Williamson, Addison County Court; John W. Burton vs. Dr. Dean S. Drake, Windsor County Court.

The first two cases have been pending since spring. The first one involves an alleged malpractice in performing an autopsy. I was able to keep the case out of court until just before our September Term opened, and Dr. Gibson was not even annoyed by service of the writ on him by the officer. I arranged service and furnishing of bail, and the case did not suffer any publicity at all, until court opened. In this case I was impressed with the idea that it would be wiser to make some settlement than to have a trial, for speaking technically, there appears to be a cause of action. However, when considered in the

light of natural justice, there is nothing to the charge, the sole point of offence being that consent was not obtained in advance. The result of the autopsy was taken immediately to the plaintiff, together with a diagram of what was found, and she adopted the information and seemed pleased to have her mind settled upon the cause of death, but afterwards she repudiated it, and sought to assail the hospital and Dr. Gibson, and gave out in speeches that she believed a nurse in the hospital had poisoned her husband to death. The situation has made Dr. Gibson reluctant to settle in any way. A conference with your committee developed the idea that one of your committee would advise going into court and admitting the fact, and depending upon the good sense of a jury to fix the damages at merely a nominal sum, but the rest of your committee deemed it best to settle if a reasonable arrangement could be made. I am confident that the case could be settled for \$200, but Dr. Gibson has not yet been willing to make settlement, and so the case stands for trial by jury at the pending term, and may be reached the last of this month.

I have reason to believe that the plaintiff is not at all confident of her position in the case, and that the case may never be pressed for trial.

The Doctor Williamson case seems to be a gross case of speculation. It involves a charge of improperly setting a broken leg. I saw a great many, practically all, of the doctors in Middlebury, and Bristol, immediately after the case was referred to me, and they all came valiantly to the support of Dr. Williamson including Dr. Dorey who had charge of the plaintiff's leg after Dr. Williamson was through with the case. I omit details for sake of brevity. Will be glad to furnish them if required. The essence of the matter is that Dr. Williamson had charge of the case in an emergency, for a matter of about thirty-six hours only, and that before turning the case over to the regular family physician, Dr. Dorey, he obtained an X-ray of the leg, which showed it was properly set, and had it examined by Dr. Wheeler and Dr. Morrison, at the Mary Fletcher Hospital.

I have no doubt that this case will never be tried, for the reason that there is apparently no merit in it, and there is no physician who would testify of any malpractice here.

The last case was called to my attention September 10, and charges malpractice in the treatment of a case of pneumonia involving a right sided empyema. I have not been able to investigate the case yet, and in the meantime the plaintiff has died as the result of an automobile accident.

The practical use of this Medico-Legal phase of your Society has developed the fact that there should be some By-Laws adapted to this work, passed by the Society, and on the 5th day of July, I submitted to your committee a tentative plan of resolutions covering this subject matter, and called your attention to the necessity of having the warning for the annual meeting drawn to cover acceptance of charter, and passing of by-laws. These resolutions are in your hands now. In general let me suggest that my investigation of the first two cases and the conferences that I had with physicians and with the attorneys for the plaintiffs convinced me that this department of your organization had created a definite impression that it was no longer an easy matter to assail a doctor with a malpractice suit, and extort hush money to protect his reputation from undeserved calumny. I have no doubt at all that the knowledge of the fact that your organization not only frowns

upon these suits, but goes out and fights them, has had a marked effect upon the prosecution of the first two suits, and has been the cause for their failure to press them vigorously to trial. It yet remains to be seen whether it will have such an effect that they will nolle prosequi the cases. I rather expect, however, that they will be nolle prossed.

I am handing you herewith my annual bill.

Very truly yours,

WARREN R. AUSTIN.

REPORT OF THE CENTENNIAL COMMITTEE.

To the members of the Vermont State Medical Society:

As Chairman of the Special Anniversary Committee, I have the honor to submit the following report, that the committee met by special appointment with the Executive Committee and the Committee on Local Arrangements at Dr. Arnold's office in January, 1913. After many informal meetings and discussions with the various members of the Society and of the committees above mentioned, the program finally settled upon for the Special Anniversary Meeting of the Society is now in your hands in the form of the official program of the meeting now in session.

Respectfully submitted,

J. N. JENNE, Chairman,

J. B. WHEELER,

E. M. POND.

REPORT OF THE COMMITTEE ON A TRI-STATE JOURNAL.

To the members of the Vermont State Medical Society.

Your committee is not yet ready to make a report as we have not yet been able to meet with similar committees from the Maine and New Hampshire Societies. We suggest a continuance of the committee.

Respectfully,

H. C. TINKHAM,

C. S. CAVERLY,

F. E. FARMER.

REPORT OF COMMITTEE ON DECREASE IN MEMBERSHIP.

Mr. President and Members of the Vermont State Medical Society:

Your committee appointed at the last meeting of the Society to investigate the falling off in the membership of the Society and to endeavor to increase the membership beg to submit the following report:

At the annual meeting held at Montpelier in October, 1901, this Society was reorganized and a new constitution adopted. The County Society was made the unit and the House of Delegates, representing these County Societies was made the governing body.

At this meeting there was reported to be a membership of 210 and an attendance of 59.

Under the new arrangement the first reports of the County Societies were transmitted to the parent Society through the secretary at the Burlington meeting in October, 1902. The reorganized society

now had a membership of 350 and there was an attendance of 104.

At the Bellows Falls meeting in 1903 there was reported a membership of 407 with an attendance of 93.

In 1904 the membership was 408 and the attendance 96.

We are unable to give the figures for the years 1905 and 1906, but the Society had the largest membership in its history at the St. Johnsbury meeting in 1907. The Secretary's report showed a membership of 449 but there were only 83 present at the meeting—an attendance of less than 20 per cent.

This showed that many were being carried on the rolls of the constituent societies who were members in name only. At this meeting it was voted that the secretaries and treasurers of the County Societies should report as members only those whose dues were paid in full to the October first preceding the meeting of the State Society.

The dropping of 83 names from the rolls was the result of this new rule. Among this number were many who had not been active in the Society for years; some, however, had simply been negligent about paying their dues and were reinstated before the next meeting and have been most active in the society ever since.

Your committee has thought best to begin with the consideration of conditions as they existed at the meeting held in Rutland in the fall of 1908. As before stated there were 83 reported to have been dropped for the nonpayment of dues, 1 resigned and 10 died, making a gross loss of 94, but 18 new members were elected and the actual loss in membership was 76, but the secretary showed a loss of 76, leaving a membership of 373.

At this meeting the annual dues for the State Society were raised to \$2.00 per annum.

At the 1909 meeting held at White River Junction 2 were reported to have died and one resigned while 30 were dropped for failure to pay dues promptly, but 14 of those previously delinquent had paid up and 38 new members were elected, making a net gain of 19 and a membership of 394.

The great numbers of new members elected make it almost certain that some of the county societies reported as new members a portion of those who had been dropped under the rule governing the payment of dues. At the St. Albans meeting, October, 1910, 3 were reinstated and 28 new members elected, making a net gain of 2 and a membership of 394. At this meeting there were adopted the by-laws regulating contract practice and the medico-legal defense by-law carrying with it an increase of \$2.00 in the annual dues, was enacted.

These innovations certainly showed their effect on the Society for at the next meeting held in Burlington in October, 1911, 61 were found to be delinquent, 6 had died and 2 resigned. None were reinstated and only 11 new members were elected, so the society suffered its first actual loss since the adoption of the by-law making only those members whose dues were paid to date. It will be noted that this followed at once upon the enactment of the contract practice regulation and medico-legal defense provisions and the levying of \$4.00 annual dues. After this loss of 58, there remained a membership of 336.

The same conditions prevailed the next year and at the 1912 meeting held at Montpelier the report showed that 4 had died and 93 had been dropped for non-payment of dues. Thirty-six had been reinstated. In spite of the election of 31 so-called new members there was a net loss of 30 and the society had a paid-

up membership of only 306 at the date of the appointment of this Committee.

Of course this membership of 306 seems very small when compared with the big enrollment of 449 in 1907—a loss of over 25 per cent. Two things must be borne in mind, however. Many of the 449 were not active and had not been for many years and again many of those reported out of the society did not realize that they were out and have already paid up when the matter was called to their attention or are ready and willing so to do when notified by their County Society officers.

At the date this report must be completed it will be impossible to secure a synopsis of the reports from the various counties, but it is hoped that the agitation by the officers of the State Society and by this committee will show gratifying results.

From what is stated above it seems to be clearly demonstrated that the rule that all dues must be paid by October first causes an appearance of many having relinquished their membership, when in reality they had simply neglected—as what doctor does not—to pay up at the proper moment.

When the committee first began its work it was thought that much aid could be obtained from the secretaries of the County Societies. While some of them have shown an interest in the welfare of the Society and have done all in their power to help us, others have been very reluctant about even answering a letter. Where the secretaries have been alive their societies have been reported prosperous, but a poor secretary is usually the officer of a poor society or will be if he holds office long enough. This committee wishes to urge upon the county societies the great importance of electing only those men to office who thoroughly believe in the organization of the medical fraternity and believe benefit to be derived from membership in The Vermont State Medical Society and The American Medical Association.

A conference of the secretaries of the County Societies was called by Dr. Beecher at Burlington, May 9th, and there were present, besides two members of this Committee and the State Secretary, the secretaries of Addison, Caledonia, Lamoille, Rutland and Windsor County Societies.

While there were some discouraging reports, the general feeling was that of optimism and it was thought that more work should be put into the smaller societies to keep them in an healthy condition.

Addison, Caledonia and Rutland Societies seemed to be in first class condition but Bennington, Lamoille, Windham and Windsor County Societies were not doing as well as they should and it was voted that the members of the committees and the secretary should visit those societies and endeavor to help them.

Dr. Hamilton visited Windham County early in June and found the real conditions much more favorable to the State Society than had been reported. In September the president and secretary of the State Society visited Bellows Falls and Brattleboro and arranged for a meeting October 1st. Dr. Hamilton attended this meeting and wishes to report that there was a good meeting, full of enthusiasm and anxiety to further the interests of the Vermont State Medical Society and the A. M. A. in every way possible. Four of the 8 reported delinquent paid at the time of the meeting and the others had probably done so at the time the membership was reported. Three new members were elected and one was accepted from Windsor County.

Dr. Bartlett reports as follows:

At a meeting of Bennington County Medical Society held at Manchester Depot on Wednesday, Sept. 24th, five applications for reinstatement and membership received and acted upon bringing the total membership up to sixteen. Three others in the county have promised to send in their applications at the next meeting, and in all probability enough will eventually join to bring the membership up to twenty. Of those who are not likely to become members the reasons seem to be, first, the contract practice clause and second the increase in dues.

The interest shown in meetings by doctors in the village of Bennington is with a few exceptions slight. One reason for this is that it is much more convenient for them to attend in Troy, Albany and North Adams, than to attend the state meetings in Vermont.

There are only a few members who seem to be willing to prepare and present papers for the county meetings, but as a rule they manage to have one or two for each meeting.

No meeting was held in July as the Secretary was away and the September meeting was to represent both July and October. One other reason for falling off in membership has been that no especial effort has been made to collect dues, and many seem to have been dropped without their knowledge and without such intention on their part.

Dr. Bailey was unable to get in touch with the Windsor County Society.

Dr. Beecher reports that he went to Lamoille County and thinks conditions favorable there.

Early in July a circular letter was addressed to the secretaries of the various County Societies, with the request that they answer seven inquiries.

These seven requests and questions with the replies thereto follow:

(1) Give the names and addresses of all the physicians that are now practicing in the same location who have for any cause discontinued their membership in the County and State Societies since the October meeting of 1908.

Addison gives the name of 1, Bennington 7, Caledonia 2, Chittenden 8, Franklin 4, Lamoille 3, Orleans 4, Rutland 5, Washington 6, Windham 8, Windsor 16. Total 64.

(2) a. How many eligible physicians are there in your county who have never joined the County Society?

Addison reports 4, Bennington 15, Caledonia 0, Chittenden 20, Franklin 16, Lamoille 0, Orleans 16, Rutland 14, Washington 6, Windsor 4. Total 101.

b. Has there ever been an organized effort to get them into the society?

Addison, Bennington and Windsor reply in the negative while Chittenden and Franklin state that there has been some effort.

(3) What in your opinion has been the reason that the membership has dropped from 449 in 1907 to 306 in 1912?

Addison, No opinion; Bennington, Contract practice regulation and increase of dues; Caledonia, The increase in dues; Chittenden, Delinquency rule and increase in dues; Franklin, "That a little coterie of men in Burlington should run it as they please"; Lamoille, Insurance clause; Orleans, No loss in this county, but a net gain of two or three; Rutland, Don't know; Washington, The treasurer has been lax in sending notices and receipts; Windham, Increased dues; Windsor, Increased dues.

(4) How many of your former members were also members of other local societies not allied with the state society?

Bennington answers, three or four; Windham says, most of them; while all the others reply, none.

(5) Did that in any way influence them to let their membership in the county society lapse?

Bennington says, no; Windham did not know.

(6) a. How does your society stand on the question of contract practice regulation?

No positive reply from Addison, Franklin, Rutland or Windsor, but Bennington, Caledonia, Chittenden, Lamoille, Orleans, Washington and Windham favor it.

b. Medico-legal protective insurance?

Addison, Bennington, Caledonia, Franklin, Rutland and Windsor are non committal; Washington is passive, while Chittenden and Orleans are in favor of it and Lamoille and Windham disapprove.

c. Ownership of the VERMONT MEDICAL MONTHLY?

Washington states that there is some dissatisfaction and Windham is against it. Nothing definite from the others.

(7) Has your society ever instructed their delegates how to vote in the House of Delegates on these and other subjects?

Bennington reports that delegates were instructed at one time to favor contract practice regulation and Washington instructed delegates to favor malpractice defense.

It was not 'till the last of August that the last of these replies was received and then only after the use of telephone and telegraph.

On August 23rd the following letter was sent to all of the 64 reported to have been dropped for any reason since the 1908 meeting.

August 23rd, 1913.

_____, Vt.
Dear Doctor:—

At the last meeting of the Vermont State Medical Society there was a committee appointed to investigate and endeavor to overcome an apparent dropping off in the membership of the constituent County Societies.

The Secretary of your County Society informs me that you have allowed your dues to remain unpaid and so lapsed your membership.

You know by this you not only lose your membership in your County Society but in the Vermont State Medical Society and the American Medical Association as well, since the dues paid to the County Society keep you in good standing as a member in the two other societies.

You have some good reason or you would not care to thus sever your relation with your medical friends and associates.

Will you help the committee by writing me and state just your reasons and make any suggestions or criticisms that you would wish brought to the attention of the Society, through its house of delegates.

Yours fraternally,

JAS. M. HAMILTON,
For the Committee.

To those who had not replied to this letter a pre-paid reply post card was sent on September 14th and we are still receiving an occasional reply as this report is being completed. To date we have had

replies from or positive information about 39 of the 64 addressed.

A synopsis of the replies follows. We have used letters to designate the authors of these letters for greater convenience in reference.

ADDISON—A writes that he is getting along in years and cannot afford to pay the additional \$2.00 for malpractice defense. "It is usually the men who get the big fees that have such suits, and they are able to protect themselves."

BENNINGTON—A reports that he does not like the working of the malpractice defense by-law. *He has paid in full.* C states that he never received a bill from the county secretary. *He has paid in full.* D is out of practice, in Hawaii. E said he could not write his reasons on a post card.

CALEDONIA—B states that our letter was the first information that he received that he was in arrears. *He at once paid in full.*

CHITTENDEN—A says he is out of practice. E says he is practicing dentistry. G is a member of Addison County Society. H is a member of Franklin County Society.

FRANKLIN—A simply negligent, will pay before October 1st. C says he is superannuated. "The many who do not attend are the bankers of the few who do." D gives no reason.

LAMOILLE—Although three were reported delinquent we wrote to only two as one is reported to have dropped his membership in the State Society and to have continued it in the County. We considered this a matter for the House of Delegates to take up and to either approve the action and allow anyone else to do the same or make it plain that members of the constituent societies must pay the full dues. B does not like the medico-legal defense clause and does not think he has been sufficiently recognized for the work he has done for the Society. C gives carelessness as his reason.

ORLEANS—B says the Society is dead.

RUTLAND—A is out of practice. B removed from the state several years ago. C stated verbally that the members of his Church were not given due recognition. D is out for financial reasons, also. E is out because he is unable to pay \$5.00 per year dues.

WASHINGTON—C states that he is a member of Chittenden County Society. E says he has been negligent. F discontinued his membership because of increased dues.

WINDHAM—B says he simply procrastinated. C *has paid in full.* D understood that the County Secretary would not act. *Has paid in full.* E said the County Society was as dead as hay. *Has paid in full.* F says "the society is for the glorification of a few men in Vermont who are better office holders than physicians."

WINDSOR—A is dead. C lost interest when the State Society took control of the County Societies. He says the dues are too high and that many do not care for the insurance. Does not think he gets much out of the society; a few men control everything, write all the papers and hold all the offices. D removed to Boston, five or six years ago. E forgot his dues and wishes to be reinstated. G did not know he was delinquent. H does not like the County Society. He has joined the Windham County Society. J says he has no good reason. L has removed to New Hampshire. M did not like the way the County Society was run and did not know of the relation between the County and State Medical Societies and the American Medical Association.

These letters and what the committee can learn from the members show that there are two reasons for the present apathetic condition in the Vermont State Medical Society. First, the lack of interest and business methods on the part of the Secretaries of the County Societies. Second, increased dues.

One member has died, many have left the county and state and some have joined other county societies and are still carried as delinquents. Several report that they have never received any notice of dues payable and were dropped most unceremoniously.

To many with large practices the sum of \$4.00 for the State Society seems small but we find many that state that it is a real hardship to them.

Your Committee beg to offer for your consideration the following recommendations:—

That there be adopted an uniform system of book and record keeping and that this society furnish the county societies uniform blanks for all compulsory reports, statement and receipt blanks and such other stationery as must be used by the county societies.

The object of this is to simplify the work of the County Societies and make reports from all of them uniform.

That some provision be made whereby men who have practiced medicine for 25 years, been in good standing in their county societies for at least 5 years and reached the age of 70 years may be carried as active members of county and state society without further payment of dues. This should not allow any one to be placed on the superannuated list unless all dues had been paid in full for the previous 5 years.

That the provisions of Art. XVI of the by-laws be enforced.

That the rule of prompt payment of dues be continued.

That this society decide positively as to the permissibility of any County Society's carrying on its rolls as a member in good standing, anyone who declines to pay dues to the state society.

That a committee be appointed at this meeting to confer with the physicians of Windsor county. That this committee be empowered to act for the society either to help them to reorganize and get in better condition or to accept the withdrawal of the society and aid in the distribution of the former members among the other county societies of the state.

That, in view of the opinions expressed by so many, the whole subject of medico-legal defense be most carefully considered before it is continued as compulsory for all, entailing increased annual dues, that in many cases are prohibitive.

All of which is respectfully submitted.

JAS. M. HAMILTON,
C. W. BARTLETT,
A. C. BAILEY.

REPORT OF COMMITTEE TO INVESTIGATE PURCHASE OF "VERMONT MEDICAL MONTHLY."

To the members of the Vermont State Medical Society:

Your Committee having in charge the matter of the advisability of purchasing and publishing the VERMONT MEDICAL MONTHLY in the future as the official organ of the Vermont State Medical Society beg leave to submit the following report:—

That they find that the cost of publishing the journal in the past has been approximately \$1,000.00 per year;

That the receipts from all sources have been approximately \$1,200.00 per year;

That the cost of publication does not include any charge for editorial and managerial work;

That the receipts from advertisers have grown less and less, year by year through the exclusion of non-ethical advertisements;

That a proposition will be presented by another committee, submitted by a similar committee representing the Medical Society of the State of Maine looking toward the joint ownership and publication of a journal to be made the official organ of the Society of that state, New Hampshire and this Society;

That in view of the facts above disclosed, your committee deem it inadvisable to take over the publication of the "VERMONT MEDICAL MONTHLY" at this time.

Respectfully submitted,

J. N. JENNE, Chairman,
C. S. SCOTFIELD,
E. M. BROWN.

Reading of several letters and telegrams by the Secretary, Dr. Beecher, from officers and invited guests from other societies who were unable to be present.

President, Dr. Stone—In taking President Benton into the Medical College Building, we have in a way adopted him into the profession and one of the penalties incurred by him in establishing his office in this building is that he will be expected to speak at our medical meetings. We will now listen to an address by President Benton.

Address—Guy Potter Benton, LL. D., President University of Vermont, Burlington.

President's Address—"One Hundred Years of Medicine in Vermont." B. H. Stone, M. D., Burlington.

Vice-President's Address—"Functions of Medical Societies." W. W. Townsend, M. D., Rutland.

President, Dr. Stone—In introducing Dr. Craig, I wish to call your attention to the fact that we owe him a great deal of gratitude. Until a short time ago, we expected Dr. Witherspoon to be with us but at the last moment he was not able to come and Dr. Craig very generously threw himself into the breach.

Address—Alexander R. Craig, M. D., Secretary American Medical Association, Chicago, Ill.

Regular meeting of House of Delegates was held in Lecture Hall B, Medical College at five o'clock.

Wednesday evening at eight o'clock at Y. M. C. A. Hall, a public address on "Progress in Medicine and the Public Welfare" was given by John L. Heffron, M. D., Dean College of Medicine, Syracuse University, Syracuse, N. Y.

After this address the President's Reception was held in the parlors of the Hotel Vermont, following which was an informal dance on the Roof Garden of the Hotel Vermont which was largely attended.

THURSDAY MORNING.

On Thursday forenoon, eighty-thirty o'clock, a Surgical Clinic was held at the Mary Fletcher Hospital by Dr. John B. Deaver, Professor of Surgery, University of Pennsylvania, Philadelphia. He did five operations including—gastroenterostomy, gallstones, hernia, appendectomy and hysterectomy.

His clinic was followed by his paper, "Common Bile Duct Obstructions."

The paper was discussed by Doctors Wheeler, Melville, Pond, Marcy, Keefe, Blodgett, Allen, Miner, Hawley, McSweeney and Deaver.

Dr. John B. Deaver was made an honorary member of the Society.

The members and invited guests had luncheon at the New Sherwood at 12.30 through the courtesy of the local members. A special car left the hospital at 12.10, and returning left the New Sherwood at 1.45 P. M.

THURSDAY AFTERNOON.

Dr. Stone, President, presiding.

The Secretary read the greetings from the W. C. T. U. conference in this city and read a telegram from the President of the State Society of New York.

Paper—"Septic Endocarditis." W. Gilman Thompson, M. D., Professor of Medicine, Cornell University, New York City.

The discussion of the paper was opened by J. N. Jenne, M. D., Burlington.

His paper was followed by a Medical Clinic in which he showed several interesting cases of stomach trouble including the X-ray plates and the apparatus used in examination of the cases.

The Secretary, Dr. Beecher, made a few remarks saying he would like particularly to have all the men who have not registered or gotten their badges to do so immediately after the close of this session. The House of Delegates met at five o'clock in Hall B.

Thursday evening the annual dinner was served at Hotel Vermont at 7.30 o'clock. The ladies were invited and there was no charge made for the banquet to the members or their ladies. Dr. W. L. Havens was anniversary chairman.

The post prandial speakers were:

Dr. Alexander R. Craig of Chicago.

Dr. C. S. Caverly of Rutland.

Dr. B. H. Stone of Burlington.

Dr. W. Gilman Thompson of New York.

Rev. I. C. Smart of Burlington.

Hon. J. E. Cushman of Burlington.

Rev. G. W. Perry of Chester.

Dr. Henry O. Marcey of Boston.

And Dr. M. J. Rosenau of New York.

FRIDAY MORNING.

The Secretary of the House of Delegates being absent the first business of the day was an address on

Infant Mortality, Cures and Prevention, by Henry L. K. Shaw, M. D., of Albany, N. Y.

Discussion opened by Dr. C. K. Johnson of Burlington, followed by Dr. H. D. Holton of Brattleboro and closed by Dr. Shaw.

Dr. Dalton—In appreciation of this very valuable paper which Dr. Shaw has given us, I would like to move that Dr. Shaw be named an honorary member of the society. It was so voted.

Dr. Shaw—I feel very proud about it and I assure you I will do anything I can to help you in reducing infant mortality.

The next address was "Acute Pancreatitis," by John F. Erdmann, M. D., Professor of Surgery, New York Post-Graduate School, New York City.

Discussion opened by Dr. C. W. Bartlett, Bennington.

On motion of Dr. Lyman Allen it was moved and seconded that Dr. John F. Erdmann be made an honorary member of the society.

The next paper was an address—"Artificial Pneumothorax in the Treatment of Pulmonary Tuberculosis," by Lawrason Brown, M. D., Saranac Lake, N. Y.

Discussion was opened by Dr. E. J. Rogers of the Vermont Sanatorium, Pittsford.

Dr. Beecher—I am sure you will be glad to know that the cases operated on by Dr. Deaver are all in fine shape so far.

A luncheon was served at the Van Ness House at 12.30 P. M. All members, guests and delegates were invited. A special car was run both ways for the accommodation of members. This luncheon was given by the local members as was all of the entertainment with the exception of the banquet.

FRIDAY AFTERNOON,

OCT. 10, 1913, Two O'CLOCK, AT MEDICAL COLLEGE.

The meeting was called to order by President B. H. Stone.

Report of House of Delegates by Dr. G. S. Bidwell, Secretary.

Meeting of House of Delegates of Vermont State Medical Society at the Medical College.

Meeting called to order by President C. W. Bartlett.

Roll call, 15 present.

Reading by Secretary of minutes of the 1912 meeting. No corrections or omissions appearing, the minutes were declared approved by the chair.

Report of Committee to investigate the "purchase of VERMONT MEDICAL MONTHLY" by Chairman, Dr. J. N. Jenne. Dr. Jenne reports that there is a movement on foot for the State Medical Societies of Maine, New Hampshire, and Vermont to unite jointly in publishing an official medical journal. On account of this movement the Committee does not now advise the purchase of the VERMONT MEDICAL MONTHLY by the Vermont State Medical Society.

Report of Committee accepted and Committee discharged.

Report of Committee on "Decrease in Membership." Dr. J. M. Hamilton, Chairman of Committee, explained the report and stated they unanimously believed that the primary cause for a dropping off in the membership of the State Society is due to a lack of enthusiasm on the part of Secretaries of County Societies. The committee recommends that missionary work be done in the County Societies. A secondary reason for decrease in membership is, in a few cases, the increase in annual dues.

Dr. Somers, Orleans County, said the Orleans County Society is in a state of indifference; that the secretaries are not to blame for it. That a county meeting has not been held for several years.

Remarks followed by Drs. Beecher, Hyatt, and Sears.

Moved by Dr. Morton that the question of legal defense of the members, by the Society, be referred to a committee of three, which committee shall report at the annual meeting of the Society in 1914. Motion declared out of order. Moved by Dr. Sears that the report of Committee "On Decrease in Membership" be accepted and adopted. Motion seconded, put and carried.

Report of Committee "On a Tri-State Journal." No member of committee present. Dr. Beecher stated that the committee is not ready to report as it has not yet been able to meet similar committees from the State Medical Societies of Maine and New Hampshire.

Dr. Hyatt moved that the committee be continued till our next annual meeting. Motion seconded, put and carried.

Unfinished business.

Dr. Hyatt moved that the charter as passed by the last General Assembly of Vermont be adopted. Motion seconded, put and carried.

New business.

Dr. Hammond invited the Society to come to Rutland for its next annual meeting. Motion seconded, put and carried.

Dr. Hyatt submitted two amendments to the by-laws as follows:

SECTION 1. The fiscal year of this Society and of the affiliating County Societies shall begin January 1st.

SEC. 2. Dues are payable January first for the ensuing year. Each County Treasurer shall collect and forward to the State Treasurer with a report of the members whose dues are therewith paid, not later than March 31st of each fiscal year, from each member of his County Society the sum of \$4.00 for the State Society, in addition to any amount that may be voted by the County Society for its own use.

SECTION 6. Members who have been in good standing in their County Societies during the preceding 5 years and have reached the age of 65 may be carried as active members of County and State Societies without further payment of dues.

The question of medical defense, by the Society, of its members was quite freely discussed by Dr. Craig, Secretary of the American Medical Association, Dr. Sears and several other members present. After much discussion, Dr. Sears moved to lay the matter on the table until the next meeting of the House of Delegates. No objection being raised it was so ordered by the chair.

Dr. Osgood moved that the chair appoint a committee of three to select a list of officers for the Society for the year ensuing and present it to the House for action at its next meeting. Motion seconded, put and carried.

Drs. Martin, Coburn, and Osgood were appointed such Nominating Committee.

Moved to adjourn until after the Medical Clinic tomorrow afternoon, October 9th. Seconded, put and carried.

6.30 P. M. Geo. S. Bidwell, Sec.

SEC. 3. The Society will pay all costs of the defence of such a suit, including the furnishing of the Society's attorney, and all necessary court and witness fees, provided the defendant member complies with these by-laws, and provided it does not appear that the claim made is a just one.

SEC. 4. As soon as a member is threatened, or if not threatened, as soon as action is commenced, he must make immediate written communication with the secretary of the committee, giving a full and complete statement of all the facts in the case, and authorizing the Society to defend the action.

The defendant shall not incur any expense, or interfere in any subsequent legal proceedings without the consent of the Society previously given in writing. And when requested by the Society, or its attorney, such defendant shall aid in securing evidence,

the attendance of witnesses, and in prosecuting appeals.

SEC. 5. In no case will the Society pay damages, or any award or compromise, effected out of court, with or without its consent and advice. And if any case should not be defended according to the tenor of these by-laws, no action shall lie against the Society for any liability therefor, unless it shall be brought by such defendant for expense actually sustained and paid in money by him, and within ninety days after final judgment in his favor is rendered upon trial of the issue.

Sec. 6. In case of payment of taxable costs by the Society, the Society shall be subrogated to the extent of such payment to all rights of recovery by the defendant against the plaintiff, his surety or sureties for costs, or their estates.

Adjourned meeting—House of Delegates, 4.45 P. M., Oct. 9, 1913.

Meeting called to order by President, Doctor Bartlett.

Dr. Hyatt read resignation of Dr. J. M. Hamilton from House of Delegates to take effect at once. Moved that resignation of Dr. Hamilton be accepted. Motion seconded, put and carried.

Report of Committee on Officers for the Society for year 1914 as follows:

President—Dr. A. L. Miner, Bellows Falls, Vt.

Vice-President—Dr. Grace Sherwood, St. Albans, Vt.

Secretary—Dr. J. M. Hamilton, Rutland, Vt.

Treasurer—Dr. C. F. Dalton, Burlington, Vt.

Auditor—Dr. C. F. Ball, Rutland, Vt.

Executive Committee—Drs. J. M. Hamilton, E. H. Martin and C. H. Beecher.

Publication Committee—Drs. J. M. Hamilton, F. E. Farmer and David Marvin.

Legislative Committee—Drs. F. W. Sears, I. S. Coburn and E. A. Hyatt.

Medical Education Committee—Dr. F. E. Clark (3 years).

Necrology Committee—Drs. E. R. Campbell, G. G. Marshall and S. S. Eddy.

Medico-Legal Committee—Dr. E. A. Hyatt, St. Albans, Vt. (3 years).

Delegate to Connecticut River Valley Medical Association—Dr. F. E. Liddell, Dorset, Vt.

Delegate to Maine State Medical Society—Dr. J. S. Hill, Bellows Falls, Vt.

Delegate to New Hampshire Medical Society—Dr. C. S. Caverly, Rutland, Vt.

Delegate to Massachusetts Medical Society—Dr. J. H. Blodgett, Bellows Falls, Vt.

Delegate to Connecticut State Medical Society—Dr. E. J. Melville, St. Albans, Vt.

Delegate to Rhode Island Medical Society—Dr. W. H. Lane, Brattleboro, Vt.

Delegate to Medical Society of the State of New York—Dr. Clayton Bartlett, Bennington, Vt.

Delegate to American Medical Association—(Two years) Dr. C. H. Beecher, Burlington, Vt.

Alternate to the American Medical Association—(Two years) Dr. S. W. Hammond, Rutland, Vt.

Anniversary Chairman—Dr. C. A. Cramton, St. Johnsbury, Vt.

Moved and seconded that the report of committee be accepted and committee be discharged. Put, carried.

Moved and seconded that Secretary be instructed to cast one ballot for entire list of officers as presented. Put, carried.

Dr. G. G. Marshall suggested that the recommendations of the Committee on Decrease be taken up one by one.

Moved by Dr. Hyatt that recommendation No. 1 which is "That there be adopted an uniform system of book and record keeping and that this Society furnish the County Societies uniform blanks for all compulsory reports, statement and receipt blanks and such other stationery as must be used by the County Societies," be incorporated with the by-laws of the Society.

Motion seconded, put and carried.

Moved by Dr. Sears that the second recommendation of the committee be incorporated into the by-laws after having changed it to read as follows:

"That members who have been in good standing in their County Societies during the preceding 5 years and have reached the age of 65 may be carried as active members of County and State Societies without further payment of dues."

Motion of Dr. Sears seconded, put and carried.

Dr. G. G. Marshall moved that recommendations 3 and 4 be endorsed by the Society. Seconded, put and carried.

Moved and seconded that we pass over recommendation No. 5, put, carried.

Moved by Dr. Fred Jackson that a committee of three be appointed by the chair to take up work recommended under No. 6, which is

"That a committee be appointed at this meeting to confer with the physicians of Windsor County. That this committee be empowered to act for the society either to help them to reorganize and get in better condition or to accept the withdrawal of the society and aid in the distribution of the former members among the other county societies of the state."

Seconded, put and carried.

Chair appointed—Dr. E. A. Miner, Bellows Falls, Vt.; Dr. J. M. Hamilton, Rutland, Vt.; and the Secretary of the Windsor County Society, C. W. Kidder of Woodstock, Vt.

Dr. Sears' motion of yesterday in regard to medical defence taken from the table.

Discussed by Drs. Hyatt, Sears, Jenne, Hill, Marshall, Wheeler, Craig, Bidwell, and Bartlett.

Moved by Dr. Hyatt that the prepared by-laws relating to new charter and medical defence be adopted.

Motion seconded, put and carried almost unanimously.

Dr. Sears of Burlington nominated for President of the House of Delegates, 1914. Seconded, put and carried.

Secretary directed to cast one ballot for Dr. Sears.

Dr. S. W. Hammond nominated 1st Vice-President. Seconded, put and carried.

Secretary directed to cast one ballot for Dr. Hammond.

Dr. F. L. Osgood nominated for 2nd Vice-President. Seconded, put and carried.

Secretary directed to cast one ballot for Dr. Osgood.

Dr. I. S. Coburn, nominated Secretary. Seconded, put and carried.

Secretary directed to cast one ballot.

Moved to adjourn. Seconded, put and carried. Meeting declared adjourned by chair.

GEO. S. BIDWELL, Secretary.

6.15 P. M., Oct. 9, 1913.

Dr. Havens of Chester, Vt.—On a full stomach, the fullest I have had for many years and filled at the

expense of the members here in Burlington, out of a warm full heart, warmed and enlarged by the good cheer of the people of Burlington and out of a full head which has been filled by an interesting program that has been presented to us at this meeting, I move that the members of the Vermont State Medical Society by a rising vote tender to the retiring President and the retiring Secretary their appreciation of what they have done to make this meeting a success, expressing to them our great appreciation of all their untiring effort in our behalf and to the local committee of arrangements our gratitude for their help in making us so comfortable during our stay and to every man, woman and child in Burlington who have contributed to make our stay a series of good times.

Dr. Bartlett assumed the chair and put the motion that had been seconded, requesting those favoring the proposition to rise. The vote was unanimous.

Dr. Stone—I wish to express my great appreciation for the honor which you have conferred upon me in making me President of your society. No greater honor do I ever expect to have and it is one which I feel I poorly deserved. I feel that I personally can claim little credit for this program but I do think that our Secretary and the Local Committee merit your vote.

Secretary, Dr. Beecher—Mr. President and gentlemen:—I am not much given to making speeches. I feel that I get along better in making arrangements for others to speak. I do however wish to thank you for the uniform courtesy and cooperation that you have shown me during the 6 years I have been Secretary of the Vermont State Medical Society. I thank you.

The first paper of the afternoon was an address:

"Treatment of Nephritis," John McCrae, M. D., Assistant Professor of Pathology, McGill University, Montreal.

Discussion was opened by Dr. E. H. Martin of Middlebury.

The second paper of the afternoon was the third annual address under the Trust Fund:

"Progress and Problems in Preventive Medicine," by M. J. Rosenau, M. D., Professor of Preventive Medicine, Harvard Medical School, Boston, Mass.

Discussion of this paper was opened by Dr. H. D. Holton of Brattleboro.

The last address on the program was

"Gastroenterostomy: Some Observations, Clinical and Experimental," Edward W. Archibald, Lecturer in Surgery, McGill University, Montreal.

After the discussion by Dr. E. M. Pond and Dr. Archibald the 100th annual meeting of the Society was adjourned.

PASTEURIZATION OF MILK.

In order to determine the best way of pasteurizing milk so as to kill the disease germs and yet not give the milk a cooked flavor or lessen its nutritive value, the Department of Agriculture has been conducting a series of experiments, treating milk at different temperatures and for different lengths of time. According to the report on these experiments, when milk is pasteurized at 145° F. for thirty minutes, the chemical changes are so slight that it is unlikely that the protein or the phosphates of lime and

magnesia are rendered less digestible than they are in raw milk.

Moreover, from a bacteriological standpoint, pasteurizing at low temperatures is found to be more satisfactory than pasteurizing at high. Where low temperatures are used, the majority of bacteria that survive are lactic acid organisms which play an important part in the normal souring of milk. When milk is efficiently pasteurized at high temperatures, the bacteria which survive are largely of the putrefactive kinds, and milk so treated, if kept for any length of time, has a tendency to rot instead of sour. From the standpoint of economy, the technologist of the dairy division finds that pasteurizing at low temperatures calls for less heat. It is found that it takes about 23½ per cent. less heat to raise milk to the temperature of 145° F. than to a temperature of 165° F. A similar gain is a saving of the ice needed, because it will require 23½ per cent. more refrigeration to cool milk to the shipping point when it is pasteurized at the higher temperature. The department, therefore, recommends that "when market milk is pasteurized it should be heated to about 145° F. and held at that temperature for 30 minutes."—*Medical Times*.

TYPHOID VACCINE.

The State Board of Health can furnish typhoid vaccine from its laboratory for \$2.10 for a package containing enough serum to protect ten persons. These packages are being shipped to our physicians in large numbers and we desire to caution the profession that they should not, under any circumstances, be used upon a patient who already has fever or who is sick with other diseases. Vaccination against typhoid fever is only administered to the healthy while they are well.—*Kentucky Medical Journal*.

THE VERMONT STATE MEDICAL SOCIETY.

What it Stands For and Where it Stands in the Profession.

At the meeting of the House of Delegates of the 100th Annual Meeting, held in Burlington, October 8th, 9th and 10th, 1913, the following was unanimously adopted:

Resolved: that the Vermont State Medical Society does hereby accept the Charter of Incorporation granted by the General Assembly of Vermont at the last session thereof, and being an Act, etc. No. 360, Acts of 1912.

No. 360.—AN ACT TO REORGANIZE THE VERMONT MEDICAL SOCIETY, AND TO AMEND "AN ACT TO INCORPORATE THE VERMONT MEDICAL SOCIETY," PASSED NOVEMBER 6, 1813, AS AMENDED BY "AN ACT IN ADDITION TO AN ACT, ENTITLED 'AN ACT TO INCORPORATE THE VERMONT MEDICAL SOCIETY,' PASSED NOVEMBER 2, 1814."

It is hereby enacted by the General Assembly of the State of Vermont:

SECTION 1. Section 1 of an act, entitled "An act to incorporate the Vermont Medical Society," passed November 6, 1813, is hereby amended so as to read as follows:

SECTION 1. All physicians and surgeons who have heretofore belonged to any county medical society under legislative act of this state, and their associates and successors, are hereby constituted in the respective counties in which they have or may hereafter be organized, bodies corporate and politic, each by the name of the medical society of the county in which such society exists, and each by such name may sue and be sued, plead and be impleaded, take by purchase or gift, and hold or dispose of estate both real and personal, and each shall have and possess all the powers, privileges and immunities incident to bodies corporate, so far as may be necessary for the purposes of their incorporation.

SEC. 2. The purpose of incorporation of each of said county medical societies shall be: The improvement of the theory and practice of the different branches of the healing art; mutual aid, benefit and protection of physicians and surgeons; assistance to the Vermont State Medical Society in carrying out the objects and purposes of said society; and in no sense shall such incorporation be for financial profit to the members or officers of such corporation.

SEC. 3. Section 2 of said act is hereby amended so as to read as follows:

SEC. 3. The societies established as aforesaid in the several counties shall have power to create and fill such offices as may be necessary or convenient for the administration of their affairs, and to make their own by-laws, provided they be not repugnant to the laws of this state or of the United States, or to the by-laws of the Vermont State Medical Society, to be mentioned hereinafter.

SEC. 4. Section 3 of said act is hereby amended so as to read as follows:

SEC. 4. Each county medical society, now existing, and that hereafter may exist, under the forms and powers of government permitted by this act, shall have the power to levy and to collect by action at law in the name of its treasurer, a reasonable tax on its members for the purposes and uses of either the county society or the state society, or the American Medical Association, or for all of them.

SEC. 5. The number of members necessary to constitute a quorum to transact the business of any of said societies, shall in no case be less than five.

SEC. 6. The president of any such society may call a meeting thereof by giving ten days' notice of the same, in a public newspaper which circulates in the county.

SEC. 7. Section 8 of said act is hereby amended so as to read as follows:

SEC. 8. Each society may fix and regulate the admission of its members, and persons so hereafter admitted as members of a county society, now or hereafter established under the provisions of this act, shall enjoy all the privileges of such society.

SEC. 8. If there should not be a sufficient number of physicians and surgeons in any county to form themselves into a medical society under the provisions of this act, it shall be lawful for such physicians and surgeons to associate with physicians and surgeons of an adjoining county for the purposes herein contemplated.

SEC. 9. Section 11 of said act is hereby amended so as to read as follows:

SEC. 11. The active members of all the county medical societies in the state, and their associates and successors, are hereby made a body corporate, without capital stock, to be organized and carried on for the sole benefit of its members and beneficiaries. Said corporation shall not be classed as a fraternal, beneficiary association.

SEC. 10. The name of this corporation shall hereafter be Vermont State Medical Society; and all sections of an act passed November 6, 1813, entitled "An act to incorporate the Vermont Medical Society," and the amendments thereto, which contain the name "Vermont Medical Society," are hereby amended so that said name shall be Vermont State Medical Society.

SEC. 11. Section 13 of said act is hereby amended so as to read as follows:

SEC. 12. The purposes and powers of the corporation shall be:

To adopt by-laws and regulations for the organization and government of the corporation, and the administration of its affairs;

To adopt by-laws for the uniform regulation of the county societies in all matters and concerns which are strictly connected with the Vermont State Medical Society;

To provide for the succession of membership by election or otherwise;

To provide for discipline and expulsion of members;

To provide for such officers, delegates and assistants as these purposes may require, and for compensation for services rendered;

To fix dates and places of meeting;

To elect honorary members;

To acquire, hold, manage or deal in property both real and personal, for the common welfare of this society and its members;

To facilitate intercourse and encourage cooperation among physicians and surgeons, to the end that the standard of professional skill, care and judgment may be elevated generally;

To advance the general, moral, social and intellectual welfare of its membership;

To protect its members from malpractice suits, and otherwise to aid its members as may be voted by the society;

To encourage and aid the progress and development of the sciences of medicine and surgery;

To promote the public health;

To affiliate with and become an integral part of the American Medical Association;

To levy and collect taxes for any of its purposes;

To do any act not contrary to law to carry out the objects of incorporation.

SEC. 12. Sections 6, 7, 10, 12, 14 and 15 of an act entitled "An act to incorporate the Vermont Medical Society," approved November 6, 1813, and all of an act in addition thereto, approved November 2, 1814, and all acts and parts of acts inconsistent with this act are hereby repealed.

SEC. 13. Sections 2, 3, 4, 5, 8, 9, 11, 13 and 16 of said act approved November 6, 1813, are hereby re-

numbered so as to be respectively sections 3, 4, 5, 6, 7, 8, 9, 11 and 12.

SEC. 14. This act shall take effect from its passage.
Approved January 29, 1913.

CONSTITUTION AND BY-LAWS, VERMONT STATE MEDICAL SOCIETY.

CONSTITUTION.

(As adopted Oct. 9, 1902, with subsequent amendments).

ARTICLE I.—*Name.*

This Society shall be called the Vermont State Medical Society.

ARTICLE II.—*House of Delegates.*

Each affiliating County Society in the State shall be entitled to and elect one delegate for every ten active members and one for any additional fraction of more than half that number to represent it at the annual meeting of the State Society.

At the first annual meeting one-half, or as near as may be, of said delegates shall be elected to serve two years and the remainder for one year. At each subsequent annual meeting a sufficient number of delegates shall be elected to complete the quota of that county.

An alternate for each delegate shall be elected at the same time.

The above named delegates shall collectively constitute the House of Delegates of the Vermont State Medical Society, and shall conduct the general business of the annual meeting and elect the officers. They shall elect their own officers and may adopt such By-Laws and Regulations for their own procedure as are not in conflict with the provisions of this Constitution and By-Laws.

No member of the House of Delegates shall be eligible to the offices in this Society of President, Vice-President, Secretary, Treasurer or Auditor.

ARTICLE III.—*Officers.*

The officers of this Society shall be a President, Vice-President, Secretary, Treasurer, Auditor, a Publication Committee of three (3) members, of which the Secretary shall be chairman; Executive Committee of three (3) members, of which the Secretary shall be one ex-officio; a Committee of Necrology of three (3) members; Committee of Legislation of three (3) members—all of whom shall be elected annually and shall hold their respective offices until the close of the next annual meeting and until their successors are elected.

There shall also be a committee on Medical Education of three (3) members, to be elected for one, two and three years respectively, and thereafter one (1) member elected each year to serve for three (3) years and until his successor is elected.

There shall be nominated by the House of Delegates each even year, two (2) members whose names shall be submitted to the Governor for appointment

to the Board of Medical Registration, in accordance with the provisions of the laws of the State.

The House of Delegates shall elect a medico-legal committee of three members, one to serve for one year, one to serve for two years, and one to serve for three years, and hereafter there shall be elected annually one member to serve for three years or until his successor is elected.

ARTICLE IV.—*Meetings.*

There shall be an annual meeting of this Society held on the first Thursday and Friday after the second Wednesday in October, at such place as shall be designated by vote of the House of Delegates at the previous annual meeting.

ARTICLE V.—*Membership.*

The active membership of this Society shall consist of the active members of the affiliating County Societies, whose dues to the State Society are paid on or before the last day of each fiscal year.

ARTICLE VI.—*Discipline.*

Any member of the Society guilty of intoxication, unprofessional or irregular practice, or of gross immorality, or for other good reasons, may be expelled or suspended from the Society by a two-thirds vote of the House of Delegates present at any annual meeting.

ARTICLE VII.—*Changes in Constitution.*

This Constitution may be repealed, altered or amended at any annual meeting, by a vote of two-thirds of the members present, provided such repeal, alteration or amendment be proposed at a previous annual meeting.

ARTICLE VIII.—*Affiliation with A. M. A.*

This Society shall be an integral part of the American Medical Association, and shall elect delegates and shall transact other necessary business in accordance with the Constitution and By-Laws of the American Medical Association.

ARTICLE IX.—*Changes in By-Laws.*

The House of Delegates may adopt such By-Laws, not repugnant to this Constitution, and may repeal, alter or amend the same in such manner as a majority of the said House of Delegates at any annual meeting may deem proper.

BY-LAWS.

ARTICLE I.—*Duties of Officers.*

SECTION 1. The President shall preside at all meetings and perform all the duties incident to such office. He shall deliver, or cause to be read, an address or dissertation on some medical subject at the annual meeting at which he presides.

SEC. 2. The Vice-President shall preside in the absence of the President, and shall perform all his duties and possess all his privileges. He shall deliver, or cause to be read, on the first day of the annual meeting, an address on medicine or surgery.

SEC. 3. The Secretary shall keep a record of the proceedings of the Society, and of the members

present at each meeting; shall conduct the correspondence; shall procure a stenographer to report the proceedings of each meeting, and shall be paid an annual salary of fifty dollars and necessary expenses. He shall, if unable to attend the meeting of the Society personally, send the records to some member in attendance.

SEC. 4. The Treasurer shall collect from the Treasurer of the County Societies and disburse all moneys of the Society agreeably to the directions of the House of Delegates, and shall make report of his doings to the Society at its annual meeting.

SEC. 5. The Auditor shall examine and verify the accounts of the various officers.

SEC. 6. The Executive Committee shall make selection of a subject or subjects for the program and appoint a Committee of Arrangements of three members for the next ensuing meeting; shall make assignment of parts to any of the members, as in their judgment they think advisable, and report the same to this meeting and to each and every subsequent meeting.

They shall make such other arrangements for the meetings of the Society as they shall deem essential for its best interests.

SEC. 7. The Committee of Arrangements shall be residents of the town where the meeting is to be held. They shall make arrangements for the place of meeting, for a banquet on the evening of the first day, and for space for medical and surgical exhibits, and such other local arrangements as they may deem essential for the success of the meeting.

SEC. 8. The Publication Committee shall receive all papers referred to them by the Society, and as soon as possible subsequent to the annual meeting of the Society shall publish such of those papers as they shall deem best suited to promote the interests of the profession and the public good, under the title Transactions, and perform all other appropriate duties.

SEC. 9. The Committee on Necrology shall report the names of deceased members, and shall cause to be prepared such brief biographies as may in each case be deemed best.

SEC. 10. The Committee on Medical Education shall keep themselves fully informed regarding the standards of Medical education in the various States; note how these standards compare with those of their own State and embody the facts learned, with any recommendations, in an annual report to the State Society.

SEC. 11. It shall be the duty of the Committee on Legislation to receive and examine all resolutions or proposed laws or acts pertaining to medical legislation which may come up at any meeting, and to report on the same at the meeting then in session; also to have charge of all legislative business of the Society which may properly come before the Legislature for enactment, as the Society may direct.

ARTICLE II.—*Membership Dues.*

SECTION 1. The fiscal year of this Society and of the affiliating County Societies shall begin January 1st.

SEC. 2. Dues are payable January first for the ensuing year. Each County Treasurer shall collect and forward to the State Treasurer with a report of the members whose dues are therewith paid, not later than March 31st of each fiscal year, from each member of his County Society the sum of \$4.00 for the

State Society, in addition to any amount that may be voted by the County Society for its own use.

SEC. 3. Any member who shall fail to pay his dues for a period of one year shall be dropped from the Society and his name stricken from the roll of membership, and he shall be so notified by the Secretary.

SEC. 4. Any member who has been dropped from the Society for the non-payment of dues, may be reinstated by paying all arrears.

SEC. 5. No member shall receive the Transactions unless his dues are paid for the fiscal year or years for which they are issued.

SEC. 6. Members who have been in good standing in their County Societies during the preceeding 5 years and have reached the age of 65 may be carried as active members of County and State Societies without further payment of dues.

ARTICLE III.—*Honorary Members.*

The Society may elect at each annual meeting, not more than two honorary members, non-residents of the State, who shall have the same privileges as ordinary members, except that they shall not be eligible to office nor have the right to vote.

ARTICLE IV.—*Delegates.*

Delegates shall be elected annually by the House of Delegates to represent this Society at the annual meetings of the State Medical societies of the New England States and New York and such other societies as the mutual interests of the societies may direct. A delegate and an alternate shall be elected every even year to represent the Society at the annual meeting of the American Medical Association.

Credentials shall be issued to delegates by the secretary when he is duly notified of the time and place of the meeting they are to attend. In case a delegate is unable to attend the meeting to which he is elected, it shall be his duty to notify the secretary of his inability to attend, and the secretary and president shall appoint another to fill his place.

ARTICLE V.—*Discussion of Papers.*

One or more members of the Society shall be appointed by the Secretary to open the discussion on each paper to be presented at any meeting.

ARTICLE VI.—*Withdrawals.*

Any member wishing to withdraw from the Society shall be permitted to do so on his written request after he shall have presented the Treasurer's receipt for all moneys due.

ARTICLE VII.—*Publication of Constitution.*

The Constitution and By-Laws, together with the names and residences of the members in good standing, shall be published in every volume of the Transactions.

ARTICLE VIII.—*Obituaries.*

The names of deceased members of the Society, with the dates of birth, graduation, admission to membership, death, and such other items in brief, of personal history, as may seem desirable to the Committee on Publication, shall be printed in each copy of the Transactions, under the caption, "In Memoriam."

ARTICLE IX.—*Time for Papers.*

No author shall consume more than twenty minutes in reading or presenting a paper, and no one shall speak more than five minutes in the discussion of a paper, without unanimous consent of the members present.

ARTICLE X.—*Addresses Property of Society.*

All addresses and papers presented in the County and State Societies thereby become the property of the State Society, and shall be placed in the hands of the Secretary within one week after the meetings for insertion in the Transactions.

ARTICLE XI.—*Order of Business.*

The program as prepared by the Executive Committee and published in accordance with the By-Laws by the Secretary shall constitute the order of business, and can not be changed or suspended, except for a definite purpose, a limited time and by a two-thirds vote of the members present.

ARTICLE XII.—*Exhibitions.*

The Committee of Arrangements of each annual meeting shall grant the privilege of exhibition, under the auspices of the Society, only to such pharmaceutical preparations as are recognized by the United States Pharmacopœia, or are not protected by trade mark, secrecy of preparation or other exclusive proprietorship.

ARTICLE XIII.—*The Council.*

The officers of the State Society and the Presidents of the affiliating County Societies shall collectively be designated the Council and shall manage the affairs of the Society when not in session.

The meetings of this Council shall be called by the President at his discretion or whenever requested in writing by five members of the society.

ARTICLE XIV.—*Members from No-Society Counties.*

In counties not having a society, any physician in good standing may become a member of the society of any adjoining county.

ARTICLE XV.—*Report of House of Delegates.*

The House of Delegates shall report through its Clerk its actions to the Society at the opening of each session, provided the House of Delegates shall have held a session prior to that time, and shall present through its Clerk a report of all its actions to the Secretary of the Society, which report shall be a part of the records and published in the Transactions.

ARTICLE XVI.—*Transfers.*

When a member of a County Society desires to join the society in another county, he may be allowed to do so upon a favorable vote of both the society to which he geographically belongs, and of the County Society which he wishes to join.

ARTICLE XVII.

SECTION 1. The State Society may defend its members sued for malpractice.

SEC. 2. It shall be the duty of the medico-legal committee to investigate and defend suits against members in good standing for alleged malpractice.

SEC. 3. The Society will pay all costs of the defense of such a suit, including the furnishing of the Society's attorney, and all necessary court and witness fees, provided the defendant member complies with these By-Laws; and provided it does not appear that the claim made is a just one.

SEC. 4. As soon as a member is threatened, or if not threatened, as soon as action is commenced, he must make immediate written communication with the Secretary of the Committee, giving a full and complete statement of all the facts in the case, and authorizing the Society to defend the action.

The defendant shall not incur any expense, or interfere in any subsequent legal proceedings without the consent of the Society previously given in writing. And when requested by the Society, or its attorney, such defendant shall aid in securing evidence, the attendance of witnesses, and in prosecuting appeals.

SEC. 5. In no case will the Society pay damages, or any award or compromise, effected out of court, with or without its consent and advice. And if any case should not be defended according to the tenor of these By-Laws, no action shall lie against the Society for any liability therefor, unless it shall be brought by such defendant for expense actually sustained and paid in money by him, and within ninety days after final judgment in his favor is rendered upon trial of the issue.

SEC. 6. In case of payment of taxable costs by the Society, the Society shall be subrogated to the extent of such payment to all rights of recovery by the defendant against the plaintiff, his surety or sureties for costs, or their estates.

BY-LAWS AND REGULATIONS OF HOUSE OF DELEGATES.

1st. The officers of this body shall consist of a President, two Vice-Presidents and a Secretary, all of whom shall be elected from members whose tenure of office as delegates does not expire during the year for which they are severally elected.

2nd. The duties of officers shall be the same as those of similar officers in other like organizations, and the Secretary shall at the close of the session turn over the records to the Secretary of the State Medical Society.

3rd. The first meeting of the House of Delegates at each annual meeting of the Society, shall be held at 5 p. m. of the first day.

Attention is called to a few changes in the By-Laws:

The fiscal year of the State Society and of all the County Societies begins January first. All that are here reported as members have paid their dues to the end of the former fiscal year September 30th. The House of Delegates at its last meeting expressly waived all dues for the period from October 1st, 1913, to December 31st, 1913. The next dues to be paid are for the entire calendar year 1914 and are payable in advance. The secretaries of the County Societies are given until the last day of March to collect and make their returns to the Treasurer of the State Society. Those that have not paid their dues at that date are automatically dropped from membership.

Instead of the usual receipt for dues the treasurers of the County Societies will issue to members registration cards that certify to the membership of the doctor named in the County Society issuing, in the Vermont State Medical Society and the American Medical Association, and acknowledges full payment of dues for the current year.

Note new Section 6 of Article II of the By-Laws:

"Members who have been in good standing in their County Societies during the preceding 5 years and have reached the age of 65 years may be carried as active members of the County and State Societies without further payment of dues."

Formerly each county society carried a few of the older men as "honorary" members. These men lost all their voting privileges and the "honor" was very limited. Now any society may carry on its rolls as active members with all the privileges and penalties except the further payment of dues those physicians whose long service and allegiance entitle them to the honor.

Across the left end of the "Registration Card" is a line on which to write the words "Article II, Sec. 6 of the By-Laws" for all those so honored by the Society.

At the 1913 meeting of the American Medical Association held in Minneapolis it was voted that all the members of the constituent County and State Medical Societies shall hereafter be known as MEMBERS OF THE AMERICAN MEDICAL ASSOCIATION.

Those formerly known as members or supporting members are now called FELLOWS OF THE AMERICAN MEDICAL ASSOCIATION, and only MEMBERS are eligible to FELLOWSHIP.

The Secretary of the State Society will upon application forward properly endorsed application blanks to any MEMBER who wishes to become a FELLOW and receive the Journal.

OFFICERS OF THE AMERICAN MEDICAL ASSOCIATION, 1913-1914.

NEXT ANNUAL SESSION, ATLANTIC CITY, JUNE 1-5, 1914.

President—John A. Witherspoon, Nashville.

President-Elect—Victor C. Vaughan, Ann Arbor, Mich.

First Vice-President—Walt P. Conaway, Atlantic City, N. J.

Second Vice-President—Frank C. Todd, Minneapolis, Minn.

Third Vice-President—Lillian H. South, Bowling Green, Ky.

Fourth Vice-President—Sol G. Kahn, Salt Lake City, Utah.

Secretary—Alexander R. Craig, 535 N. Dearborn St., Chicago.

Treasurer—William Allen Pusey, Chicago.

Editor and General Manager—George H. Simmons, 535 N. Dearborn St., Chicago.

Board of Trustees—Philip Marvel, Atlantic City, 1914; Philip Mills Jones, San Francisco, 1914; W. T. Sarles, Sparta, Wis., 1914; M. L. Harris, Secretary, Chicago, 1915; W. T. Councilman, Chairman, Boston, 1915; Thomas McDavitt, St. Paul, Minn., 1915; W. W. Grant, Denver, 1916; Frank J. Lutz, St. Louis, 1916; Oscar Dowling, Shreveport, La., 1916.

Judicial Council—Alexander Lambert, Chairman, New York City, 1914; James E. Moore, Minneapolis, Minn., 1915; Hubert Work, Pueblo, Colo., 1916; George W. Guthrie, Wilkes-Barre, Pa., 1917; A. B. Cooke, Los Angeles, Cal., 1918; Alexander R. Craig, Secretary, 535 N. Dearborn St., Chicago.

Council on Health and Public Instruction—H. M. Bracken, Minneapolis, 1914; W. C. Woodward, Washington, D. C., 1915; H. B. Favill, Chairman, Chicago, 1916; Walter B. Cannon, Boston, 1917; W. S. Rankin, Raleigh, N. C., 1918; Frederick R. Green, Secretary, 535 N. Dearborn St., Chicago.

Council on Medical Education—Arthur D. Bevan, Chairman, Chicago, 1914; George Dock, St. Louis, 1915; W. D. Haggard, Nashville, Tenn., 1916; James W. Holland, Philadelphia, 1917; H. D. Arnold, Boston, 1918; N. P. Colwell, Secretary, 535 N. Dearborn St., Chicago.

Council on Pharmacy and Chemistry—L. F. Kebler, Washington, D. C., 1914; John Howland, Baltimore, 1914; Henry Kraemer, Philadelphia, 1914; F. G. Novy, Ann Arbor, Mich., 1915; George H. Simmons, Chairman, Chicago, 1915; H. W. Wiley, Washington, D. C., 1915; O. T. Osborne, New Haven, Conn., 1916; Torald Sollman, Cleveland, Ohio, 1916; M. I. Wilbert, Washington, D. C., 1916; Reid Hunt, Washington, D. C., 1917; J. H. Long, Chicago, 1917; Julius Steiglitz, Chicago, 1917; J. A. Capps, Chicago, 1918; David L. Edsall, Boston, 1918; R. A. Hatcher, New York City, 1918; W. A. Puckner, Secretary, 535 N. Dearborn St., Chicago.

OFFICERS OF THE VERMONT STATE MEDICAL SOCIETY.

President—A. L. Miner, Bellows Falls, Vt.

Vice-President—Grace Sherwood, St. Albans, Vt.

Secretary—Jas. M. Hamilton, Rutland, Vt.

Treasurer—C. F. Dalton, Burlington, Vt.

Auditor—C. F. Ball, Rutland, Vt.

Executive Committee—Jas. M. Hamilton, E. H. Martin and C. H. Beecher.

Publication Committee—Jas. M. Hamilton, F. E. Farmer and David Marvin.

Legislative Committee—F. W. Sears, I. S. Coburn and E. A. Hyatt.

Medical Education Committee—J. M. Allen (1914), L. W. Burbank (1915), F. E. Clark (1916).

Necrology Committee—E. R. Campbell, G. G. Marshall and S. S. Eddy.

Medico-Legal Committee—J. N. Jenne (1914), C. W. Bartlett (1915), E. A. Hyatt (1916).

Delegate to Connecticut River Valley Medical Association—F. E. Liddell, Dorset, Vt.

Delegate to Maine State Medical Society—J. S. Hill, Bellows Falls, Vt.

Delegate to New Hampshire Medical Society—C. S. Caverly, Rutland, Vt.

Delegate to Massachusetts Medical Society—J. H. Blodgett, Bellows Falls, Vt.

Delegate to Connecticut State Medical Society—E. J. Melville, St. Albans, Vt.

Delegate to Rhode Island Medical Society—W. H. Lane, Brattleboro, Vt.

Delegate to Medical Society of the State of New York, Clayton Bartlett, Bennington, Vt.

(Continued on page xii.)

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THERAPEUTIC NOTES.

COD LIVER OIL IN STRUMOUS SKIN DISEASES.—In a certain wide variety of skin lesions, usually of obstinate character, the exciting as well as the continuing cause is a nutritional defect. In these strumous skin diseases the remedy indicated to supply the tissues with needed nourishment is, without a doubt, cod liver oil. To give cod liver oil as such, is of course, out of the question; but the physician has at his command various palatable preparations, notably Cord. Ext. Ol. Morrhuæ Comp. (Hagee).

Inasmuch as these strumous skin disorders occur with great frequency in children, and children are markedly intolerant of the usual cod liver oil emulsions, it becomes plain that Cord. Ext. Ol. Morrhuæ Comp. (Hagee) has a special field of usefulness in connection with such skin lesions. This product is palatable and easily digested and serves admirably for administration over long periods.

THE RESTLESSNESS AND SLEEPLESSNESS OF PNEUMONIA.—The relief of restlessness and sleeplessness of pneumonia calls for the use of a soporific that will not depress the heart, yet it must possess an effectiveness, otherwise its only influence will be to disturb the already suffering stomach.

The unusual value of Pasadyne (Daniel's Concentrated Tincture Passiflora Incarnata) as an agent of its class and its freedom from depressing effects, insure that no better agent than it can be had to allay the restlessness and sleeplessness of pneumonia. A sample bottle may be had by addressing the laboratory of John B. Daniels, 34 Wall St., Atlanta, Ga.

BRONCHIAL AILMENTS OF THE ELDERLY PERSONS.—It is at this season of the year that persons well along in years demand of the physician an agent which will remedy a chronic bronchial inflammation so common in late years, and which, as a rule, becomes especially distressing with the onset of cold weather.

An essential point to be considered in connection with the therapeutic needs of these cases, is that whatever is ordered should serve the double purpose of acting as a sedative to the bronchial mucosa and as a nourishing agent to the tissues, without, at the same time, causing any disturbance of the normal functions of the gastric apparatus. The physician will find in Hagee's Cordial of the Extract of Cod Liver Oil Compound an agent which meets these requirements clearly. Given to these old bronchial sufferers this palatable preparation of cod liver oil produces favorable results.

DEFECTIVE NUTRITION.—In cases of defective nutrition, when pallor, anemia, loss of strength, and perhaps emaciation occur, without any obvious cause, Cord. Ext. Ol. Morrhuæ Comp. (Hagee) is of great service, especially when the subject is a child.

In persons broken down with any of those chronic diseases which take the form of dyscrasia, this same remedy is also of great service.

(Continued from page 312)

Delegate to American Association (2 years) C. H. Beecher, Burlington, Vt.
 Alternate to the American Medical Association—(2 years) S. W. Hammond, Rutland, Vt.
 Anniversary Chairman—C. A. Cramton, St. Johnsbury, Vt.
 Local Committee of Arrangements for 1914 Meeting—S. W. Hammand, Chairman, Rutland; W. W. Townsend, Rutland; C. F. Ball, Rutland.

The annual meeting the first Thursday and Friday after the second Wednesday in October.

OFFICERS AND MEMBERS AND DATES OF FIXED MEETINGS OF THE CONSTITUENT COUNTY SOCIETIES.

ADDISON COUNTY MEDICAL SOCIETY.

OFFICERS.

President—S. S. Eddy, Middlebury.
 Vice-President—F. C. Phelps, Vergennes.
 Secretary and Treasurer—E. H. Martin, Middlebury.
 Librarian—M. H. Eddy—Middlebury.
 Delegates to State Society—F. T. Briggs, Bristol; H. L. Williamson, Bristol; E. H. Martin, Middlebury.

MEMBERS.

E. G. Blaisdell.....Bridport
 F. T. Briggs.....Bristol
 O. M. Bump.....Salisbury
 D. J. Carroll.....Vergennes
 G. P. Collins.....Ferrisburg
 P. L. Dorey.....Middlebury
 M. H. Eddy.....Middlebury
 S. S. Eddy.....Middlebury
 G. F. Edmunds.....Bristol
 C. W. Howard.....Shoreham
 E. H. Martin.....Middlebury
 A. M. Norton.....Bristol
 L. F. A. Ouellet.....Orwell
 F. C. Phelps.....Vergennes
 Edward Pilon.....Vergennes
 Mrs. M. M. Platt.....Shoreham
 R. W. Prentiss.....Middlebury
 F. E. Read.....Salisbury
 F. M. Rogers.....Vergennes
 L. B. Rowe.....Orwell
 I. P. Sharon.....Shoreham
 C. H. Smith.....Lincoln
 V. M. Waterman.....Vergennes
 W. G. Watt.....Vergennes
 W. J. White.....Middlebury
 H. L. Williams.....Bridport

Fixed Meetings—First Thursday of January and July (annual), and upon call of Secretary.

BENNINGTON COUNTY MEDICAL SOCIETY.

OFFICERS.

President—F. C. Liddle, Dorset.
 Vice-President—L. E. Hemenway, Manchester Center.

Secretary and Treasurer—Lucretius H. Ross, Bennington.

Delegates to State Society—C. W. Bartlett, Bennington, and F. C. Liddle, Dorset.

MEMBERS.

C. W. Bartlett.....Bennington
F. E. Dean.....South Shaftsbury
L. E. Hemenway.....Manchester
L. J. Calahan.....Manchester Ct.
J. I. Cochrane.....E. Dorset
L. M. Kelley.....Manchester Ct.
A. E. Houle.....Bennington
F. C. Liddle.....Dorset
L. H. Ross.....Bennington
E. A. Tobin.....Bennington
E. V. Trull.....Manchester
J. B. Woodhull.....North Bennington

Fixed Meetings—Second Wednesday of January, April, July (annual) and October.

CALEDONIA COUNTY MEDICAL SOCIETY.

OFFICERS.

President—H. L. Pache, Danville.

Vice-President—W. B. Fitch, St. Johnsbury.

Secretary and Treasurer—H. H. Miltimore, St. Johnsbury.


Delegates to State Society—C. A. Cramton, St. Johnsbury; W. J. Aldrich, St. Johnsbury; E. H. Ross, St. Johnsbury.

Censors—W. G. Ricker, St. Johnsbury; A. J. Mackey, Peacham.

MEMBERS.

W. J. Aldrich.....St. Johnsbury
J. M. Allen.....St. Johnsbury
D. R. Brown.....Lyndonville
Winifred O. Brown.....Lunenburg
A. A. Cheney.....Lyndonville
C. A. Cramton.....St. Johnsbury
J. C. Breitling.....Lunenburg
H. G. Bullard.....St. Johnsbury
G. W. Darling.....So. Ryegate
E. E. Dickerman.....West Burke
I. N. Eastman.....Groton
H. A. Elliott.....Barnet
C. Fairbanks.....St. Johnsbury
F. E. Farmer.....St. Johnsbury
W. B. Fitch.....St. Johnsbury
G. B. French.....Concord
J. M. Gibson.....McIndoes Falls
R. T. Johnson.....West Concord
F. C. Kinuey.....Greensboro Bend
R. F. Kinney.....Richmond
H. H. Lee.....Wells River
A. L. Leonard.....Lyndon
C. E. Libbey.....Danville
A. J. Mackey.....Peacham
H. H. Miltimore.....St. Johnsbury
R. M. McSweeney.....St. Johnsbury
H. L. Pache.....Danville
C. A. Prevost.....St. Johnsbury
W. G. Ricker.....St. Johnsbury
E. H. Ross.....St. Johnsbury
T. R. Stiles.....St. Johnsbury
F. Welsh.....St. Johnsbury
C. C. Waller.....Lyndonville

Fixed Meetings—Second Tuesdays of January, April and July and third Tuesday of October (annual).



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 Vice-President—T. S. Brown, Burlington.
 Secretary and Treasurer—E. H. Buttles, Burlington.
 Executive Committee—E. T. Brown, Burlington;
 O. N. Eastman, Burlington; S. L. Morrison, Burlington.

MEMBERS.

B. D. Adams.....Burlington
 L. Allen.....Burlington
 B. J. Andrews.....Burlington
 J. A. Archambault.....Essex Junction
 F. J. Arnold.....Burlington
 F. W. Baylies.....Burlington
 C. H. Beecher.....Burlington
 W. D. Berry.....Burlington
 B. J. A. Bombard.....Burlington
 G. H. Branch.....Grand Isle
 E. T. Brown.....Burlington
 Lester R. Brown.....Burlington
 T. S. Brown.....Burlington
 E. H. Buttles.....Burlington
 N. J. Caron.....So. Hero
 W. G. Church.....Burlington
 F. E. Clark.....Burlington
 I. S. Coburn.....Milton
 C. F. Dalton.....Burlington
 J. H. Dodds.....Burlington
 O. N. Eastman.....Burlington
 W. H. Englesby.....Burlington
 R. C. Flagg.....Essex Center
 G. I. Forbes.....Burlington
 S. J. Goodrich.....Waterbury
 D. D. Grout.....Waterbury
 D. C. Hawley.....Burlington
 E. A. Heath.....Winooski
 A. S. C. Hill.....Winooski
 L. C. Holcombe.....Milton
 H. D. Hopkins.....Waterbury
 Sue E. Howard.....Burlington
 M. H. Hunter.....Essex Junction
 J. A. Hunter.....Essex Junction
 G. B. Hulburd.....Jericho
 F. K. Jackson.....Burlington
 J. N. Jenne.....Burlington
 C. K. Johnson.....Burlington
 R. W. Johnson.....Burlington
 E. F. Jones.....Hinesburg
 Henry Ladd.....Essex Center
 E. S. Lane.....N. Ferrisburg
 W. A. Iyman.....Burlington
 N. W. MacMurphy.....Burlington
 David Marvin.....Essex Junction
 R. I. Maynard.....Burlington
 P. E. McSweeney.....Burlington
 W. H. Mitchell.....Shelburne
 L. B. Morrison.....Burlington
 S. L. Morrison.....Burlington
 A. H. Mountford.....Burlington
 W. S. Nay.....Underhill
 C. A. Pease.....Burlington
 C. N. Perkins.....Burlington
 G. F. Rist.....Burlington
 G. M. Sabin.....Burlington
 F. W. Sears.....Burlington
 D. A. Shea.....Burlington
 F. R. Stoddard.....Shelburne

B. H. Stone.....Burlington
 J. D. Tanner.....Burlington
 W. T. Tilley.....Richmond
 H. C. Tinkham.....Burlington
 E. G. Twitchell.....Burlington
 M. C. Twitchell.....Burlington
 H. R. Watkins.....Burlington
 J. B. Wheeler.....Burlington
 C. F. Whitney.....Burlington
 H. L. Wilder.....Burlington
 J. S. Wilson.....Ft. Ethan Allen

Meetings—As arranged by the Executive Committee, usually the last Thursday of each month except July and August. Annual meeting in September.

FRANKLIN COUNTY MEDICAL SOCIETY.

OFFICERS.

President—G. S. Clark, Montgomery.
 Vice-President—W. B. Arnold, St. Albans.
 Secretary and Treasurer—W. J. Upton, St. Albans.
 Censors—W. W. Hutchinson, Enosburgh Falls; R. B. Thomas, Enosburgh Falls.
 Delegates—H. H. Johnson, Franklin; A. L. Cross, Swanton; E. L. Washburn, E. Berkshire.

MEMBERS.

C. G. Abell.....Enosburgh Falls
 W. B. Arnold.....St. Albans
 C. E. Allen.....Swanton
 A. M. Brown.....Enosburgh Falls
 E. M. Brown.....Sheldon
 G. S. Clark.....Montgomery Center
 A. L. Cross.....Swanton
 A. Davidson.....St. Albans
 John Gibson.....St. Albans
 W. W. Hutchinson.....Enosburgh Falls
 E. A. Hyatt.....St. Albans
 W. B. Hyde.....Bakersfield
 C. U. Johnson.....West Berkshire
 H. H. Johnson.....Franklin
 E. R. Lape.....Swanton
 C. A. Loftus.....St. Albans
 E. P. Lunderville.....Richford
 S. H. Martin.....Alburgh
 E. J. Melville.....St. Albans
 A. O. Morton.....St. Albans
 F. W. Norris.....Swanton
 S. W. Paige.....St. Albans
 J. R. Patten.....Fairfield
 R. N. Pelton.....Richford
 J. G. Perrault.....St. Albans
 H. L. Pierce.....Swanton
 C. S. Scofield.....Richford
 Grace Sherwood.....St. Albans
 R. B. Thomas.....Enosburgh Falls
 W. J. Upton.....St. Albans
 E. L. Washburn.....East Berkshire
 W. H. Wright.....Georgia

Fixed Meetings—Second Wednesday of May (annual) and third Wednesday in September.

LAMOILLE COUNTY MEDICAL SOCIETY.

OFFICERS.

President—J. C. Morgan, Stowe.
 Vice-President—S. G. Start, Cambridge.
 Secretary and Treasurer—W. M. Johnstone, Morrisville.

Delegate to State Society—W. M. Johnstone, Morrisville.
 Censors—W. M. Johnstone, Morrisville; J. C. Morgan, Stowe; C. S. Leach, Hyde Park.

MEMBERS.

H. W. Barrows.....Stowe
 G. L. Bates.....Morrisville
 L. P. Holcomb.....Johnson
 W. M. JohnstoneMorrisville
 C. S. Leach.....Hyde Park
 John C. MorganStowe
 R. G. Prentiss.....Johnson
 S. G. Start.....Cambridge
 A. J. Valteau.....Morrisville

Fixed Meetings—First Wednesday of January and July.

ORLEANS COUNTY MEDICAL SOCIETY.

MEMBERS.

F. N. Aldrich.....Derby Center
 J. C. Colby.....Stanstead, P. Q.
 B. D. Longe.....Newport
 R. M. Wells.....Barton Landing
 R. F. Willard.....Coventry

RUTLAND COUNTY MEDICAL AND SURGICAL SOCIETY.

OFFICERS.

President—O. C. Baker, Brandon.
 Vice-President—J. J. Derven, Poultney.
 Secretary and Treasurer—F. H. Gebhardt, Rutland.
 Censors—M. R. Crain, Rutland; G. D. Parkhurst, Fair Haven; J. W. Eastabrook, Brandon.
 Delegates to State Society—Wm. Stickney, Rutland; G. G. Marshall, Rutland; H. L. Manchester, Pawlet; S. W. Hammond, Rutland; T. H. Hack, Proctor.

MEMBERS.

E. L. Averill.....Brandon
 O. C. Baker.....Brandon
 C. F. Ball.....Rutland
 A. H. BelleroseRutland
 C. H. BonneyLudlow
 W. N. Bryant.....Ludlow
 C. S. Caverly.....Rutland
 E. R. Clark.....Castleton
 B. D. Colby.....Sudbury
 S. A. Cootey.....Wallingford
 T. A. Cootey.....Rutland
 E. F. Crofutt.....Poultney
 M. R. Crain.....Rutland
 N. J. Delahanty.....Rutland
 J. J. Derven.....Poultney
 J. S. Eastwood.....Brandon
 E. D. Ellis.....Poultney
 J. W. Estabrook.....Brandon
 C. A. Gale.....Rutland
 F. H. Gebhardt.....Rutland
 O. J. Gilchrist.....Rutland
 C. E. Griffin.....Fair Haven
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 T. H. Hack.....Proctor
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 E. J. Hall.....Rutland
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J. D. Hanrahan.....	Rutland
L. A. Heidel.....	Rutland
J. S. Horner.....	West Pawlet
R. Lape.....	Fair Haven
H. L. Manchester.....	Pawlet
M. J. Mangan.....	Rutland
G. G. Marshall.....	Wallingford
H. L. Martyn.....	Cuttingsville
J. H. Miller.....	Wallingford
R. H. Miner.....	Windsor
J. P. Newton.....	Benson
G. D. Parkhurst.....	Fair Haven
C. W. Peck.....	Brandon
C. C. Perry.....	West Rutland
E. M. Pond.....	Rutland
C. B. Ross.....	West Rutland
G. Rustedt.....	Rutland
H. R. Ryan.....	Rutland
R. H. Seeley.....	Castleton
R. E. Smith.....	Rutland
Wm. Stickney.....	Rutland
C. W. Strobell.....	Rutland
J. E. Thomson.....	Rutland
W. W. Townsend.....	Rutland
E. O. Whipple.....	Danby
J. H. Woodward.....	New York City
C. B. Warren.....	West Rutland

Fixed Meetings—Second Tuesdays of January, April and July (annual) and third Tuesday of October.

WASHINGTON COUNTY MEDICAL SOCIETY.

OFFICERS.

President—E. A. Colton, Montpelier.
 Vice-President—E. B. Watson, Williamstown.
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THE POSSIBILITY OF THE SPREAD OF LEPROSY.

The presence of leprosy here and there in the United States is held by some to be of little consequence in comparison with the occurrence of other diseases, such as tuberculosis and typhoid fever. Nevertheless, it is a menace to the public health and deserves special consideration because of the possibility of the spread of the infection, the hopeless nature of the disease and the aversion of the public to persons so afflicted. While the spread of leprosy in recent years has not been marked, it must be remembered that cases of the disease have developed from time to time in American-born persons, some of whom had not been outside of the United States. Of 278 lepers reported in 1901, 145 were American-born, according to Surgeon-General Blue of the United State Public Health Service, who discusses this question in a recent issue of *The Journal of the American Medical Association*. By reason of our interests in the Philippine Islands and other possessions, there is danger of the introduction of leprosy by returning American citizens. Large numbers of soldiers, sailors and civil employees spend prolonged periods abroad, particularly in the Philippine Islands, where there is decided danger of contracting the infection. The disease may not manifest itself on these persons for years after their return. These facts taken in connection with our knowledge of the rise and fall of epidemics in the past suggest the possibility of a greater prevalence of the disease fifty or one hundred years hence, unless appropriate preventive measures are instituted. Leprosy should not be regarded as of no importance, neither should it be an object of unreasonable aversion on the part of the public. Education is necessary to overcome this feeling. Public health officials and physicians should systematically teach the people the nature of the disease, the extent of its contractibility, and above all, the humane treatment that should be accorded lepers. Every case of leprosy should be promptly reported to the proper health authority and, wherever necessary, the laws should be so amended and penalties provided for non-observance. All lepers should be isolated to prevent the spread of the disease, but this should be so done as to promote the comfort and happiness of those so afflicted. On account of the difficulty of providing these conditions in towns, counties and states where single cases of

leprosy occur, and because of consequent inadequate methods of control, there should be established under the United States Public Health Service a national leper home for the care and treatment of such cases as may be turned over by state and local health authorities for the purpose.

DEPARTMENT OF AGRICULTURE WILL USE BACTERIAL COUNT IN MILK INSPECTION.

Statements Being Circulated That Department Has Abandoned Bacteriological Examination of Milk are Without Foundation.

WASHINGTON, D. C.—Information has come to the Department of Agriculture that persons representing certain milk dealers are circulating the statement that the U. S. Department of Agriculture has abandoned all bacteriological examination of milk as a test for its cleanliness and fitness for human consumption.

The Department, therefore, has issued the following statement of its position:

1. All statements that the department has abandoned, or will abandon the bacteriological examination of milk shipped in interstate commerce as a means of determining its cleanliness and fitness for human consumption are without foundation. While the department has not fixed any specific bacteriological count as a standard in the enforcement of the Food and Drug Act, it does use bacteriological examinations in reaching its conclusions, and will continue to use these methods irrespective of what action any association may take. The department has never stated that it will not use such methods.

2. The only change in policy in the department in regard to bacteriological examinations has been to discontinue basing prosecution upon the bacteriological examination of a single sample. It now collects a number of samples at different times and examines them bacteriologically. If the bacteriological examination shows that the milk is not clean, but is not a serious menace to



